BEFORE THE ENVIRONMENT COURT
I MUA I TE KOOTI TAIAO O AOTEAROA

IN THE MATTER	of the Resource Management Act 1991 (**the Act**)
AND	
IN THE MATTER	of appeals under s 120 of the Act
BETWEEN	KAINGA ORA (AS SUCCESSOR TO HOUSING NEW ZEALAND CORPORATION)
	ENV-2019-AKL-000081
	ROYAL FOREST AND BIRD PROTECTION SOCIETY OF NEW ZEALAND INCORPORATED
	ENV-2019-AKL-000082
	HERNE BAY RESIDENTS ASSOCIATION INCORPORATED AND THE SAINT MARY'S BAY ASSOCIATION INCORPORATED
	ENV-2019-AKL-000086
	Appellants
AND	AUCKLAND COUNCIL
	Respondent
AND	AUCKLAND COUNCIL (Healthy Waters)
	Applicant

Environment Judge J A Smith sitting alone under s 279 of the Act
In Chambers at Auckland

CONSENT ORDER

[A] Under s 279(1)(b) of the Resource Management Act 1991, the Environment Court, by consent, orders that:

(1) the appeals are allowed in part subject to the amendments set out in Schedule 1 to this order;

(2) the appeals are otherwise dismissed.

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[B] Under s 285 of the Resource Management Act 1991, there is no order as to costs.

REASONS

Introduction

[1] This order relates to the following three appeals against a decision made by Auckland Council granting resource consent to Healthy Waters for a discretionary activity to authorise diversions and discharges associated with the existing and future public stormwater network:

(a) ENV-2019-AKL-000081: Kainga Ora (as Successor to Housing New Zealand Corporation) (**HNZ**);

(b) ENV-2019-AKL-000082: Royal Forest and Bird Protection Society of New Zealand Incorporated (**Royal Forest and Bird**); and

(c) ENV-2019-AKL-000086: Herne Bay Residents Association Incorporated and The Saint Mary's Bay Association Incorporated (**Residents Associations**).

[2] The appeal by HNZ sought that part of the decision be disallowed and that changes be made to the conditions of consent. The appeals by the Residents Associations and Royal Forest and Bird sought that the resource consent application be declined.

[3] The following parties gave notice of an intention to become a party to one (or more than one) of the appeals under s 274 of the Act, and have signed the memorandum setting out the agreement reached:

(a) Auckland Transport

(b) Candor 3 Limited

(c) Kainga Ora (as Successor to the Housing New Zealand Corporation)

(d) Karaka and Drury Limited

(e) Mana Whenua Kaitiaki Forum

(f) Manikum Enterprises Limited

(g) McKenzie & Co Consultants Limited

(h) New Zealand Transport Agency

(i) North Eastern Investments Limited

(j) Oil Companies (Mobil Oil New Zealand Limited, BP Oil New Zealand Limited, and Z Energy Limited)

(k) Royal Forest and Bird Protection Society Of New Zealand Incorporated

(l) St Lukes Environmental Protection Society

(m) Friends of Oakley Creek Te Auanga Incorporated

Agreement reached

[4] There have been a number of discussions between the parties, and two days of Court-assisted mediation on 5 and 21 August 2019.

[5] As a result, all parties have agreed that consent can be granted, subject to the amended consent conditions.

[6] By way of a brief summary, the key agreed amendments relate to:

(a) Ensuring that effects on Significant Ecological Areas are adequately addressed through the SMP process;

(b) Enhancing the information that must be available through the 3-yearly reporting and review processes;

(c) Additions to schedules 7 and 10 to address site specific issues raised by some section 274 parties;

(d) Enhancing the level of on-going engagement with stakeholders, including the Residents Associations and Royal Forest and Bird;

(e) Clarifying (and generally limiting) the extent to which the approval of SMPs, including amendments to schedules and other matters, can be authorised by Manager Certification;

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(f) Requiring reviews of the consent where necessary to be consistent with future plan changes giving effect to the National Policy Statement for Freshwater Management (2014) or its replacement; and

(g) Clarifying conditions relating to the vesting of assets that become part of the public stormwater network.

Consideration

[7] In making this order the Court has read and considered the Appellants' notices of appeal and the joint memorandum of the parties dated 2 October 2019.

[8] The Court is making this order under s 279(1)(b) of the Act, such order being by consent, rather than representing a decision or determination on the merits pursuant to s 297. The Court understands for present purposes that:

(a) all parties to the proceedings have executed the memorandum requesting this order; and

(b) all parties are satisfied that all matters proposed for the Court's endorsement fall within the Court's jurisdiction, and conform to relevant requirements and objectives of the Act, including in particular Part 2.

Order

[9] Therefore, the Court orders, by consent, that:

(a) The conditions are amended as set out in **Schedule 1** to this order;

(b) The appeals are resolved in their entirety; and

(c) There is no order as to costs.

DATED at Auckland this 30th day of October 2019

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J A Smith
Environment Judge

SCHEDULE ONE: AMENDMENTS TO CONSENT CONDITIONS

Auckland Council – Public Stormwater Network Discharge Consent: Amended Conditions: 19 September 2019

Auckland Council – Stormwater Network Diversion and Discharge Consent Conditions

Scope and operation of consent

1. This consent (the Auckland Stormwater NDC) authorises diversions and discharges of stormwater from the Public Stormwater Network within existing and future urban areas (including special purpose zoned land and marina land) as set out in Schedule 1 of this consent, in accordance with Auckland Council application number DIS60069613, and authorises the following activities:

   a. Existing stormwater diversions to (including from existing road and other existing land uses) and discharges from the Public Stormwater Network at the time of commencement of this consent;

   b. New or changes to stormwater diversions and discharges from the renewal, maintenance, development or improvement of the Public Stormwater Network, subject to compliance with either:

      i. the performance requirements in Schedule 4; or

      ii. an adopted Stormwater Management Plan listed in Schedule 10.

   c. New, or changes to existing, diversions and discharges resulting from:

      i. the increase of, or changes to, impervious areas from redevelopment, intensification, and/or land use change within existing urban areas that discharge to the Public Stormwater Network; or

      ii. the increase of/changes to impervious areas from the development of Greenfield land where stormwater assets connect directly to, and/or are subsequently vested and become part of, the Public Stormwater Network;

   subject to compliance with the performance/connection requirements in Schedule 4 or an adopted Stormwater Management Plan listed in Schedule 10.

Advice Note 1

*For the avoidance of doubt the following activities are **not** authorised under this consent:*

a. Discharge of contaminants from the activity area of an industrial and trade activity site;

b. Sediment discharges from earthworking;

c. Stormwater diversions and discharges from the existing or new road network:

   i. that discharge directly to a stormwater network that is not owned and operated by Auckland Council; and/ or

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ii. *that discharge directly to a freshwater or coastal natural environment or to ground;*

d. Stormwater diversions and discharges in rural zoned areas, other than stormwater discharges from urban areas that may enter rural areas;

e. Wastewater discharges and discharges from the combined sewer network;

f. Private network discharges and any associated stormwater infrastructure that directly connect to a stormwater network that is not owned and operated by the Auckland Council, and / or are not subsequently vested to the Auckland Council;

g. Any diversion of overland flowpaths and floodplains as a result of structures or land modification not authorised by the holder of this consent;

h. Physical works that give effect to the discharge consent.

i. All other discharges (not being stormwater) that are either permitted under the Auckland Unitary Plan (e.g. including those in E.4 of the Auckland Unitary Plan) or for which resource consent has been obtained.

Advice Note 2

This consent does not alter the status of any activities permitted under the Auckland Unitary Plan and as such approval for permitted activities is not required under this consent. Any activity that is permitted under the Auckland Unitary Plan may still require other approvals, including under any Council bylaw relating to the public stormwater network.

Advice Note 3

Redevelopment under Condition 1(c)(i) does not include:

(a) maintenance or repairs, such as:

(i) pothole repairs to parking areas, driveways and paving; and

(ii) painting of roofing and exterior cladding;

(b) resurfacing that does not involve re-direction of existing stormwater flows or drainage networks; and

(c) trenching and resurfacing associated with the installation, maintenance, repair and replacement of underground equipment, infrastructure or underground utility works.

As such, these minor activities do not constitute a change to existing diversions and discharges for the purposes of this consent.

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Advice Note 4

Private stormwater networks authorised by a private diversion and discharge consent are not subject to the requirements of this consent, but may be permitted to connect to the public stormwater network subject to other approvals, including under any Council Bylaw relating to the public stormwater network.

2. The Public Stormwater Network shall be operated, maintained, improved and developed to meet the strategic objectives, outcomes and targets listed in Schedule 2, and in accordance with:

   a. the Auckland Stormwater Network Discharge Consent Application (August 2017) and associated Appendices or any modifications that result from reviews undertaken pursuant to the conditions of the Auckland Stormwater NDC;

   b. the best practicable option methodology and prioritisation set out in Schedule 3;

   c. the requirements of Schedule 4, including in respect of increases/changes to stormwater flows from development and redevelopment where stormwater assets connect directly to, or become part of the Public Stormwater Network;

   d. the certification processes in Schedule 5;

   e. monitoring as required by Condition 37;

   f. any specific public stormwater network management obligations set out in Schedule 7; and

   g. an adopted Stormwater Management Plan listed in Schedule 10.

Commencement

3. This consent will not commence until all charges under section 36 of the RMA relating to the receiving, processing and granting of the Auckland Stormwater NDC have been paid in full to the Auckland Council.

Expiry

4. This consent expires on 26 November 2052.

Administrative charges

5. The Consent Holder shall pay the council an initial consent compliance monitoring charge of $5,000 (inclusive of GST), plus any further monitoring charge or charges to recover the actual and reasonable costs incurred to ensure compliance with the conditions attached to this consent/s.

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Advice note:

The initial monitoring deposit is to cover the cost of inspecting the site, carrying out tests, reviewing conditions, updating files, etc., all being work to ensure compliance with the resource consent. In order to recover actual and reasonable costs, monitoring of conditions, in excess of those covered by the deposit, shall be charged at the relevant hourly rate applicable at the time. The Consent Holder will be advised of the further monitoring charge. Only after all conditions of the resource consent have been met, will the council issue a letter confirming compliance on request of the Consent Holder.

6. The Consent Holder shall pay the Council's reasonable costs in carrying out its functions in terms of certification and monitoring under this consent.

Site access

7. The Consent Holder shall ensure that access to relevant parts of the Public Stormwater Network is available at all reasonable times to the Manager, to the extent that such access is within the Consent Holder's control, for the purpose of carrying out inspections, surveys, investigations, tests, measurements and to take samples.

Erosion protection

8. All new stormwater discharge structures shall be designed, constructed and managed to minimise material erosion at points of discharge.

Advice Note:

The works associated with erosion control measures may require separate consents.

Operation and Maintenance Plan

9. An Operation and Maintenance Plan for the operation and maintenance of the Public Stormwater Network shall be prepared and implemented by the Consent Holder. At a minimum the Operation and Maintenance Plan must include a description of the processes in place for, and key elements of, the operation and maintenance of the stormwater network, including:

   a. Maintenance of Council's stormwater asset register.

   b. Updating the asset register following commissioning and vesting of any new major stormwater network infrastructure or management assets under this consent.

   c. The frequency for updating the publicly available components of the register onto Council's GIS.

   d. An inspection and maintenance programme for network infrastructure to prevent or minimise erosion at discharge points, obstructions to flows and hazards.

   e. Pre and post storm monitoring processes of critical or at-risk components of the network to minimise blockages and flood risk.

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f. Incident reporting processes.

g. Maintenance requirements and schedules for infrastructure and asset types and a process for remedial actions.

h. An outline of the service standards to be achieved and how these are given effect to.

i. Compliance with any relevant conditions of the Auckland Stormwater NDC.

j. Any requirements that result from decisions on the Auckland NDC application number DIS60069613.

10. The Consent Holder shall review the Operation and Maintenance Plan at least every six years as part of the Stormwater Network Discharge Review (Condition 25). The Consent Holder may also review the Operation and Maintenance Plan at any time for operational purposes. Any changes to the Operation and Maintenance Plan must be certified in accordance with Condition 34.

11. The Consent Holder shall provide a copy of the Operation and Maintenance Plan to the Manager for certification, within six months of the commencement of this consent. This copy of the Operation and Maintenance Plan shall include any amendments that have been made during the processing of the Auckland Stormwater NDC application number DIS60069613.

Changes to Catchment Discharges

12. The Consent Holder shall maintain a register of all Assessments of Changes to Catchment Discharges prepared to support the development, renewal, maintenance or improvement of the public stormwater network. This register is to be made available to the Manager for review on request.

Process for adopting a Stormwater Management Plan

13. A Stormwater Management Plan that is proposed after the commencement of this consent may be adopted by the Consent Holder into this consent:

a. Through a change to conditions under section 127 of the RMA;

b. Following the approval of a notified Plan Change, provided:

i. The Stormwater Management Plan has been prepared to support the notified Plan Change and the Plan Change is consistent with that Stormwater Management Plan; and

ii. The Stormwater Management Plan is consistent with Schedule 2 and Schedule 4; or

c. Through the process provided in Schedule 8, unless:

i. The Stormwater Management Plan imposes a more stringent standard than those set out in Schedule 4 on land owned or controlled by a

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party other than the requestor (third party property), and that party has not given their written approval; or

ii. The Stormwater Management Plan requires or relies on works on third party property and the third party has not given their written approval; or

iii. The Stormwater Management Plan includes a discharge from a Greenfield development into a 'significant ecological area terrestrial' or 'significant ecological area marine' as defined in the Auckland Unitary Plan. This condition applies to discharges that will occur via a new or existing stormwater network that discharges directly into the significant ecological area or into a stream that then flows directly into a significant ecological area marine. This condition does not apply to Greenfield land that is zoned as an urban area in the Auckland Unitary Plan at 1 October 2019.

Should any of the circumstances in c apply, the Stormwater Management Plan may only be adopted into the consent by the processes detailed in a or b.

14. Left blank to keep numbering order.

15. Left blank to keep numbering order.

16. The Consent Holder shall maintain Schedule 10 as a register(s) of approvals and adopted Stormwater Management Plans and update this register(s) within three months following the adoption of a Stormwater Management Plan. This register is to be made available to the Manager on request. The extent and terms of an adopted Stormwater Management Plan shall be included on a publicly accessible GIS layer as soon as practicable following adoption.

16A. An adopted Stormwater Management Plan may be amended by the Consent Holder, provided that:

a. The amendments relate to matters of detail and do not result in reduced levels of stormwater management performance or increase the likelihood of adverse environmental effects than that provided for and/or required by the adopted Stormwater Management Plan;

b. The Consent Holder has engaged with parties relying on the Stormwater Management Plan for their developments on the proposed amendments and there is no dispute in relation to the amendments;

c. The amendments have been certified by the Manager in accordance with Condition 34; and

d. The updated Stormwater Management Plan is included in the register of adopted Stormwater Management Plans in Schedule 10 and the publicly accessible GIS layer.

Where a dispute arises in relation to Clause b, the following process shall apply:

a. Written notice of the dispute must be provided by the Consent Holder to the Manager. The written notice must include: a copy of the relevant Stormwater

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Management Plan, the amendments sought to the Stormwater Management Plan, the reasons why the Consent Holder considers the amendments meet the requirements of clause a, any response provided by a party relying on the relevant Stormwater Management Plan for their developments, and the reasons for the disagreement under clause b;

b. The Manager will provide the written notice to the Technical Reference Group (**TRG**) (Condition 20) with a request to comment on the reasons for the disagreement. The Manager shall nominate a timeframe for the TRG to provide its response;

c. The Manager must, with reasons, certify or decline to certify the proposed amendments to the Stormwater Management Plan, taking into account the reasons for the disagreement in accordance with clause c.

Surrendering of existing stormwater discharge consents

17. The Consent Holder shall commence a process to surrender Existing Stormwater Consents within six months of the Auckland Stormwater NDC commencing. In surrendering Existing Stormwater Consents, the Consent Holder shall ensure that:

a. *Existing Stormwater Consents* are assessed against the conditions of this consent before they are surrendered, in accordance with the process in Appendix I of the Auckland Stormwater NDC consent application.

b. Any public stormwater network management obligations (**Obligations**) set out in conditions on the *Existing Stormwater Consents* that are not covered by the conditions of the Auckland Stormwater NDC and that remain relevant shall be incorporated into Schedule 7, which forms part of the conditions of the Auckland Stormwater NDC. Amendments to Schedule 7 to incorporate additional Obligations or to remove Obligations from this schedule that are no longer relevant must be certified by the Manager in accordance with Condition 34.

c. Any stormwater management requirement of an existing Stormwater Consent or covered by an existing legal agreement between the Council and another party addressing stormwater management of a development, that are current and relevant shall be adopted as a Stormwater Management Plan and listed in Schedule 10. This can be done by adopting the existing catchment or stormwater management plan in its entirety or in part as appropriate.

d. Prior to surrendering an *Existing Stormwater Consent* that was granted after 31 January 2001 (unless otherwise stated below), it engages with the following parties to ascertain their views on what Obligations and related Integrated Catchment Management Plan/ Stormwater Management Plan requirements need to incorporated into the schedules of this consent:

- Mana whenua with interests in the area to which the consent relates;
- The Department of Conservation for those areas identified in its submission dated 19 March 2018 on the Auckland Stormwater NDC;

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- Parties relying on the consent for stormwater management to undertake Greenfield or Brownfield development.
- Parties relying on the consents for stormwater management relating to existing marinas, including consents granted prior to 31 January 2001.

18. The Consent Holder shall complete this process within 24 months of the commencement of this consent.

Adoption of Existing Integrated Catchment Management Plans and Stormwater Management Plans

19. The Consent Holder shall:

a. Maintain a publicly available and online schedule of adopted Integrated Catchment Management Plans and Stormwater Management Plans (Schedule 10).

b. Include in the schedule any Integrated Catchment Management Plans / Stormwater Management Plans approved after 1 January 2013.

Technical Reference Group (TRG)

20. Within three months of the commencement of the resource consent, the Consent Holder shall establish, and thereafter retain at its cost an independently appointed Technical Reference Group (TRG) to assist in a review and advisory role. The membership and method of appointment of the TRG shall comprise:

a. A Professional Engineer with significant knowledge and experience of the development sector and the design and operation of stormwater networks within Auckland, appointed by the Chief Executive of Engineering New Zealand (or its successor).

b. A full Member of the New Zealand Planning Institute (NZPI) with significant experience in development/stormwater planning within Auckland, appointed by the Chief Executive of the NZPI (or its successor).

c. Two representatives with experience in Te Mauri o te Wai, including one with formal qualifications in an aspect of environmental science such as freshwater quality, ecology or similar; appointed by the Chair of Auckland Council's Mana Whenua Kaitiaki Forum or alternatively the Chief Executive of the Auckland Council.

Where the appointing or nominating role is declined by the organisation, that role shall be undertaken by the Chief Executive of Auckland Council.

Where the TRG is required to review information and provide advice the Consent Holder shall commission the TRG to prepare a report setting out the TRG's comments and advice (as is relevant) and submit this report to the Manager. For the avoidance of doubt the Consent Holder shall instruct the TRG to document and report any material differing views where they arise.

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Mana Whenua Engagement Strategy

21. Within twelve months of the commencement of this consent, the Consent Holder shall prepare and implement a Mana Whenua Engagement Strategy, developed in conjunction with Mana Whenua. The purpose of the Strategy is to ensure that Mana Whenua are involved in the on-going implementation of the consent conditions, including (but not limited to) the Monitoring Strategy, the Triennial Stormwater Network Review and Report and the 6 yearly Stormwater Network Discharge Review.

Stormwater Management Plan Template

22. Within six months of the commencement of this consent, the Consent Holder shall prepare an updated Stormwater Management Plan Template. In preparing the updated Stormwater Management Plan Template the Consent Holder must:

    a. Have regard to the existing template provided in Appendix F of the NDC application and the requirements of Schedule 4;

    b. Consider the differing requirements for catchments / developments of varying scales and complexity;

    c. Engage with members of the development industry (active in stormwater management) on the template requirements;

    d. Engage with mana whenua to appropriately provide for their involvement in stormwater management planning; and

    e. Ensure that the Stormwater Management Plan Template requires an assessment of the values of, and potential effects on, Significant Ecological Areas scheduled in the Auckland Unitary Plan, and how they are to be managed, to such detail as corresponds with the scale and significance of those effects.

    The Consent Holder may subsequently amend the Stormwater Management Plan Template at any time, following the same process.

    Advice Note

    The purpose of the template is to ensure all necessary information is included in the Stormwater Management Plan and that while parties preparing Stormwater Management Plans will be invited to use the template, alternative formats will be accepted providing they include all necessary information.

Triennial Stormwater Network Review and Report

23. The Consent Holder shall prepare a 'Triennial Performance Report' addressing the following and provide this to the Manager:

    a. Register of Capital Works undertaken to achieve the Auckland Stormwater NDC objectives, outcomes and six-year targets set out in Schedule 2.

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b. Register of amendments to the Operation and Maintenance Plan.

c. Updated register of adopted Stormwater Management Plans.

d. The information from the Stormwater Monitoring Strategy and associated programme required by Condition 37, including analysis of data, comparison against recognised guidelines (including those in the NPSFM), associated trends of relevance to the stormwater network and the implication of these. In particular, this shall include an assessment of state and trends for representative sites affected by stormwater discharges authorised by this resource consent for the following monitoring programmes (or equivalent):

   i. Stream water quality;

   ii. Stream ecology;

   iii. Groundwater quality;

   iv. Marine benthic contaminants; and

   v. Marine ecology.

e. Engagement with mana whenua.

f. Any changes to Council's Long-Term Plan that may affect the ability to achieve the Auckland Stormwater NDC outcomes and any changes to the Auckland Stormwater NDC that may be required as a result.

g. A summary review of the above information, undertaken by the TRG.

24. The first 'Triennial Performance Report' shall be provided to the Manager by 1 February 2021. The second report shall be provided by 30 September 2022 and then every three years from that date. Where a 'Triennial Performance Report' is due to be provided at the same date as a Stormwater Network Discharge Review pursuant to Condition 25, the information listed in Condition 23 may be incorporated into the Stormwater Network Discharge Review, and no additional Triennial Performance Report is required.

6 yearly Stormwater Network Discharge Review

25. The Consent Holder shall provide the Manager with a 'Stormwater Network Discharge Review' that outlines a review of the implementation of the Auckland Stormwater NDC for certification. The review shall include a summary of:

a. The matters listed in Condition 23 (Triennial Stormwater Network Review and Report).

b. Performance review against the Auckland Stormwater NDC objectives, outcomes and six-year targets set out in Schedule 2 and the wider BPO set out in Schedule 3.

c. The information from the Stormwater Monitoring Strategy and Programme required by Condition 37, including analysis of data, comparison against

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recognised guidelines (including those in the NPSFM), associated trends of relevance to the stormwater network and the implication of these.

d. The certified Operation and Maintenance Plan (Condition 9).

e. Summary of the relevant Auckland Council's strategic documentation including the Council's current Long-Term Plan and Annual Plan.

f. Review of best practice stormwater management technologies.

g. Review of any:

- legislative changes, including (without limitation) changes to the Unitary Plan; and
- new or changed customary marine titles, Treaty of Waitangi settlements or any iwi management plans;

that have relevance to the operation of the stormwater network and associated discharges.

h. Review, and if necessary, update of climate change predictions to be adopted for design and management of the stormwater network.

i. Identification of any changes that may be required in management processes, consent conditions, network discharges, consent objectives and outcomes and/or six-year targets.

j. A summary of any updates to models, methodologies, and mapping undertaken to manage the stormwater network.

k. Engagement undertaken with mana whenua in accordance with Condition 29.

l. Engagement undertaken with stakeholders listed in Condition 30.

m. Key areas of public feedback in accordance with Condition 31.

26. The first Stormwater Network Discharge Review shall be provided to the Manager by 30 September 2022, and then every six years from that date.

27. As a result of information from Condition 25, the Stormwater Network Discharge Consent Review shall identify any changes that are required to address unanticipated adverse effects and update the best practicable option for managing the Public Stormwater Network. This includes changes to:

a. Management processes

b. Objectives and outcomes

c. Revised six-year targets

d. Consent conditions including changes to connection requirements.

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Advice note:

The Consent Holder may, under Condition 33, update the schedules and targets. Other changes may require an application under s127 of the RMA.

28. The Consent Holder shall provide a draft Stormwater Network Discharge Consent Review to the TRG, and commission it to undertake and report on an independent review of the material prepared in accordance with Conditions 23 and 25 with the aim of ensuring the outcomes of the Auckland Stormwater NDC are met and continue to represent current best practice. The TRG report shall be provided to the Manager when the Consent Holder seeks the Manager's certification of the Stormwater Network Discharge Review.

29. The Stormwater Network Discharge Review shall include engagement with iwi and mana whenua as provided below:

    a. Inform iwi authorities with mana whenua interests within the area subject to this consent of the intention to update the Stormwater Network Discharge Review three months prior to commencing the Review, and the timetable and opportunities for these iwi authorities to engage in the preparation of the Review.

    b. Engage with iwi authorities with mana whenua interests within the area covered by this consent, including receiving environment classifications, cultural values and all discharges to water.

    c. Prepare a summary of feedback from engagement, including highlighting any area of contention.

30. The six yearly Stormwater Network Discharge Review shall include engagement with the parties listed below (or their successors), unless Condition 30A applies, generally in accordance with the engagement process outlined in Condition 29:

    a. Local Boards.

    b. Wastewater network utility operators within Auckland.

    c. Other stormwater network utility operators within Auckland.

    d. Auckland Regional Public Health Service.

    e. Relevant stormwater and development sectors.

    f. The Property Council of New Zealand.

    g. Metals New Zealand

    h. Department of Conservation.

    i. Oil Industry Environmental Working Group.

    j. Royal Forest and Bird Protection Society of New Zealand.

    k. Stop Auckland Sewage Overflows Coalition.

    l. The Manukau Harbour Restoration Society.

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m. Other parties agreed to by the Consent Holder.

A summary of feedback from engagement shall be prepared, including highlighting any area of contention.

30A. Should a party listed in Condition 30 not wish to engage on the six yearly review, or is a group that is no longer in existence, then this should be recorded and reported in the summary of feedback. There is no further requirement to engage with this party in subsequent six-yearly reviews. A party that does not respond in writing within one month accepting a written request by the Consent Holder to engage is deemed to not wish to engage for the purposes of this condition.

30B. Engagement under Conditions 29 and 30 shall be in general accordance with the principles of consultation outlined in Section 82 of the Local Government Act 2002. This includes the preparation and circulation of a summary of key stormwater management initiatives, network performance and receiving environment state and trends including the information required under Condition 23 d. prior to engaging.

Community Feedback

31. The six yearly Stormwater Network Discharge Review shall provide for input from members of the public and public interest groups by:

a. Making a summary of the implementation of the NDC, relevant monitoring information and implications for the on-going implementation of the NDC publicly available and accessible;

b. Give details on the Council website, and any public Council general information publication distributed by the Council and place a public notice in the daily or weekly newspapers circulating in the region of:

i. The timetable for the six yearly review

ii. The information available and where it can be sourced

iii. How members of the public or interest groups can provide feedback and the timeframe to give responses which shall not be less than 30 working days

c. Preparing a summary of feedback that is received, including highlighting any key areas of feedback and matters that may be put forward for further consideration and engagement through Council's LTP process.

d. The process in Conditions 31 a. – c. shall be completed prior to the public notification of the following LTP.

32. The Consent Holder shall report back to those parties outlined in Conditions 29 and 30, and any party under Condition 31 who provided feedback on the outcomes of

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the Stormwater Network Discharge Review, in particular the changes identified in Condition 27.

Amendments to the Consent Schedules and six-year Targets

33. Amendments to the Schedules of this consent can be made as follows:

a. The Strategic Objectives and Outcomes in Schedules 2 and 3, and Schedules 4, 5, 8 and 9 – through a change to the conditions of this consent in accordance with s127 or s128 of the RMA;

b. Schedules 2 and 3 other than the Strategic Objectives and Outcomes – following a six-yearly review subject to Manager's Certification in accordance with Condition 34, or alternatively through a change to the conditions of this consent in accordance with s127 or s128 of the RMA;

c. All other Schedules – at any time subject to compliance with the requirements of the conditions of this consent or alternatively through a change to the conditions of this consent through s127 or s 128 of the RMA.

Manager's Certification Process

34. The Consent Holder shall obtain Manager's certification for:

a. Amendments to Schedule 7 to incorporate any relevant management Obligations adopted from existing consents that are surrendered or to remove any management Obligations that have been given effect to (Condition 17) and to certify that the process in Condition 17 has been followed and the relevant stormwater management requirements in an existing consent or covered by an existing legal agreement between the Council and another party addressing stormwater management of a development, are appropriately incorporated into an adopted Stormwater Management Plan (as required).

b. The six-year Stormwater Network Discharge Review set out in Condition 25 to certify that the reporting and engagement required by Conditions 25 to 30B have been undertaken.

c. Amendments to the schedules of this consent where Manager's certification is required under Condition 33 to certify that the amendments are in accordance with the NDC Strategic Objectives and Outcomes in Schedule 2 and 3.

d. The Operation and Maintenance Plan and associated changes as set out under Conditions 9 - 11 to certify that it meets the requirements of Condition 9.

e. The mitigation of new or changes to stormwater discharges resulting from the renewal, maintenance or improvement of the public stormwater network infrastructure owned and operated by Auckland Council where a Stormwater Management Plan is required to certify that the Stormwater Management Plan meets the NDC Outcomes (Schedule 2), to the extent practicable

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applies an Integrated Stormwater Management Approach and is the best practicable option for the given project.

f. The Auckland Stormwater NDC Monitoring Programme (Conditions 37 – 39 and Schedule 6) and subsequent changes to this monitoring programme to certify that the programme is consistent with the Monitoring Framework provided in evidence to the hearing of Consent Application: DIS60069613 and that matters in Condition 39 clauses a and b are satisfied.

g. Any amendments to adopted stormwater management plans to certify that the amendments meet Condition 16A clauses a and b.

h. Any amendments or update to Schedule 1 to certify that it incorporates the pipe network and Auckland Urban Areas, as indicated on Auckland Council GIS at that time.

35. In seeking the Manager's certification, the Consent Holder shall provide information necessary to enable certification requirements.

Advice Note

The Manager or the Consent Holder may request the TRG to undertake an assessment and recommendation report to be considered in the certification process.

The Manager, either of their own accord or at the request of the Consent Holder, may appoint an experienced independent person who is a Certified Hearings Chairperson to exercise the Manager's certification function.

36. Amendments to the consent, six-year targets, Schedules and the BPO are authorised under this consent once these proposed amendments are certified by the Manager or a change in conditions of consent has been approved.

Monitoring Strategy

37. Within twelve months of the commencement of this consent, the Consent Holder shall prepare an Auckland Stormwater NDC Monitoring Strategy and associated programme to assess performance and progress against NDC Objectives, Outcomes and six-yearly targets and provide this to the Manager for certification. The Monitoring Strategy and programme shall consider and incorporate to the extent relevant to the NDC and BPO the monitoring elements provided below and depicted in Schedule 6:

a. Long term State of the Environment (SoE) monitoring including, but not limited to the following programmes (or equivalent):

i. Stream water quality;

ii. Stream ecology;

iii. Groundwater quality;

iv. Marine benthic contaminants; and

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v. Marine ecology.

b. Freshwater Management Tool (in development);

c. Healthy Waters monitoring

- Hydrology – Rain and Flow
- Catchment specific monitoring and catchment changes
- Stream assessment

d. Targeted monitoring

- Sediment
- Currently identified as well as emerging contaminants
- Gross Pollutants and Plastics

e. Intervention effectiveness monitoring, including:

- Stormwater Device Performance
- Water Sensitive Design implementation
- Impact of interventions on the receiving environment

f. Safeswim

- Safe Networks

g. Compliance with the conditions and schedules of this consent

h. Ngā tohu o te mauri o te wai (cultural monitoring)

i. Asset monitoring

j. Monitoring of on-site stormwater devices associated with Stormwater Management Plans adopted and implemented under this consent (Schedule 10).

38. The Consent Holder shall ensure that the certified Stormwater NDC Monitoring Programme is implemented in accordance with the requirements of that programme.

39. The Consent Holder may seek changes to the certified Stormwater NDC Monitoring Programme subject to obtaining Manager's certification for these changes and alternative monitoring programmes (Condition 37). Certification shall be based on the following criteria:

a. Ensure the programme monitors the performance of the network and potential impacts to assess whether the objectives and outcomes of the consent are achieved;

b. Provide relevant and reliable information to inform the Triennial and 6-yearly reviews.

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provided that the Consent Holder may elect to monitor additional elements without the need for certification provided there is no change or reduction in the approved Monitoring Programme. In this case the Manager shall be informed of the additional elements to be included within the Monitoring Programme.

Public information

40. The Consent Holder shall make the following information publicly available and update this information where necessary:

a. Indicative maps of flood hazards.

b. Indicative maps of the public drainage network.

c. Adopted Stormwater Management Plans.

d. The Triennial Stormwater Performance Review and Report and the Stormwater Network Discharge Review and Report.

e. The six-yearly review documentation and outcome.

f. Requirements for connections to the public stormwater network including (as relevant):

i. Auckland Council's Code of Practice for Land Development and Sub-division (Stormwater);

ii. Auckland Council's Stormwater Bylaw;

iii. Schedule 4;

iv. Other connection requirements.

Advice Note

Public access can be provided through Council's website/GIS system.

NPSFM Review

40A. When a plan change to the Auckland Unitary Plan that implements the National Policy Statement for Freshwater Management becomes operative (NPSFM Plan Change), the Consent Holder must apply under section 127 of the RMA to change the conditions of this consent if necessary to implement the NPSFM Plan Change. The application under section 127 must be lodged with the Council within 6 months of the NPSFM Plan Change becoming operative; or before any alternative review date expressly specified in the NPSFM Plan Change (in which case the alternative review date applies).

40B. The application under section 127 required by Condition 40A shall include any required changes to the Monitoring Strategy to:

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a. Ensure that the Monitoring Strategy considers the objectives and attributes in the NPSFM Plan Change to the extent relevant to the operation of the stormwater network; and

b. Adopt benchmarks relevant to any targets established in the NPSFM Plan Change that are relevant to the operation of the stormwater network.

Review

41. The conditions of this consent may be reviewed by the Council pursuant to section 128 of the RMA (with the costs of the review process being borne by the Consent Holder) by the giving of notice, pursuant to section 129 of the RMA:

a. In September to December 2023 and thereafter at six yearly intervals;

b. At any time to address any unanticipated adverse effects that arise from the exercise of the consent or to adopt any new requirement of a National Policy Statement, National Environmental Standard.

42. The review under Condition 41 may only be for one or more of the following purposes:

a. To address any material adverse effects on the environment, that in the opinion of the Council, were not assessed by this consent and which may arise from the exercise of the consent, or upon which the exercise of the consent may have an influence, including, but not limited to:

i. modifying existing conditions, to require the Consent Holder to identify the character or nature of any discharges authorised by this Consent and to report the results of any monitoring or investigations to the Manager;

ii. consideration of the conditions of this consent that may relate to the matters contained in s.108(4) of the RMA or any Act in substitution thereof.

iii. inserting conditions, or modifying existing conditions, including the attached schedules to this consent, related to the selection and/or implementation of the BPO to prevent or minimise any adverse effects on the environment resulting from the diversions and discharges authorised by this consent.

b. To insert conditions, or modify existing conditions to the extent necessary to give effect to or reflect any new RMA instruments including any National Policy Statement, National Environmental Standard and the Auckland Unitary Plan, where the Policies, Rules and Standards are material in the opinion of the Council.

c. To take account of changes in the objectives or targets of this consent, or changes in the science or engineering of stormwater discharges resulting in changes to stormwater best practice.

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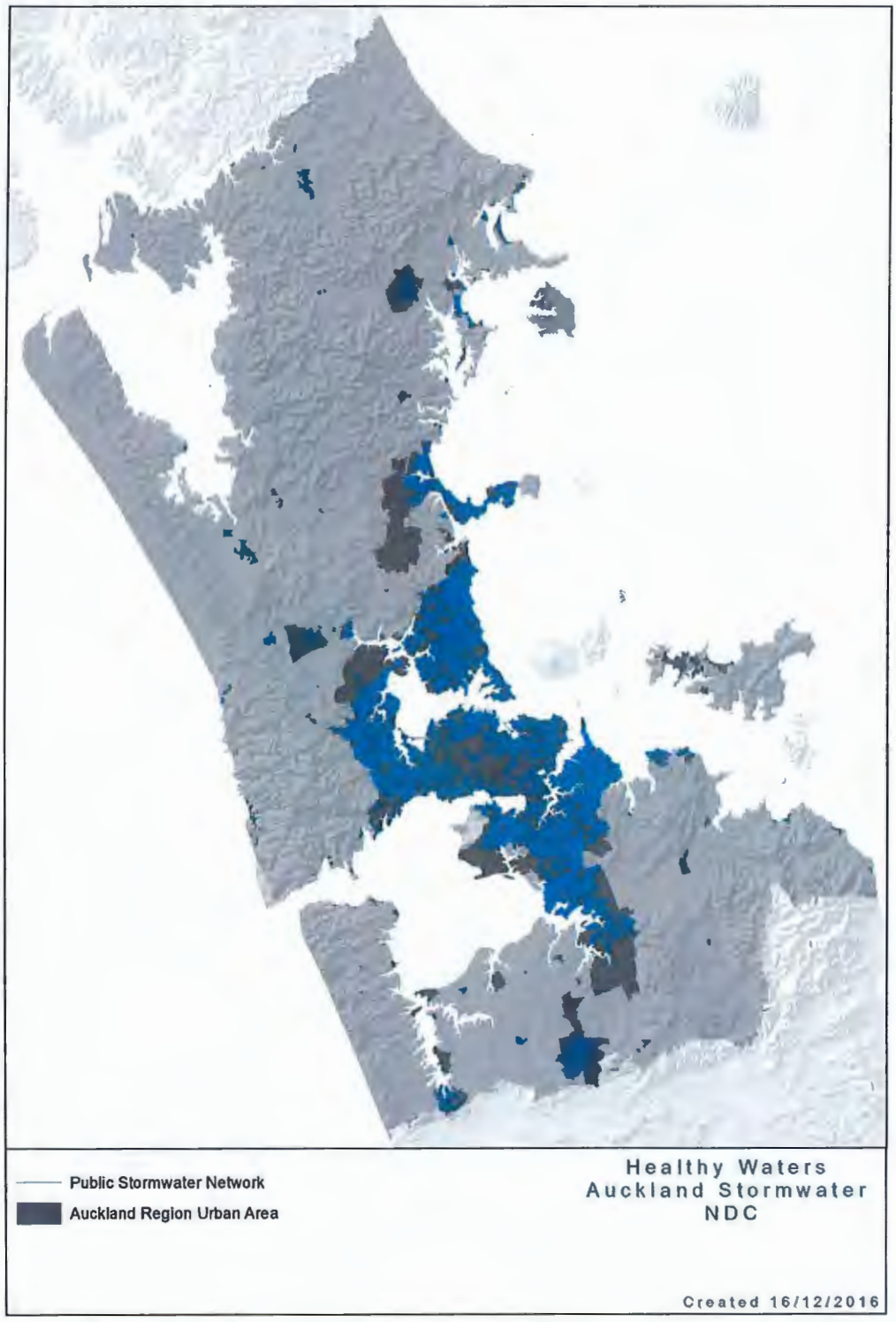
d. Should there be a change in the accountability for the combined network, resulting in the wastewater authority being no longer fully accountable for the stormwater component of the wastewater network.

Schedules (These form part of the conditions of consent):

Schedule 1:	Map of the 'urban' area and current extent of the public stormwater network
Schedule 2:	Auckland Stormwater NDC Strategic Objectives, Outcomes and Six year targets
Schedule 3:	Best Practicable Option
Schedule 4:	Requirements for changes to be authorised under the Auckland Stormwater NDC
Schedule 5:	Certification Processes
Schedule 6:	Monitoring Programmes
Schedule 7:	Public Stormwater Network Management Obligations Retained from Existing Consents
Schedule 8:	Process for adopting a Stormwater Management Plan
Schedule 9:	Definitions - Definitions of terms use in the Conditions
Schedule 10:	Adopted or Transferred Stormwater Management Plans

Schedule 1: Map of the 'urban' area and current extent of the public stormwater network



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Schedule 2: Auckland Stormwater NDC Strategic Objectives, Outcomes and Six yearly targets

ISSUE	OBJECTIVES	OUTCOMES	SIX YEAR TARGETS (LTP and AMP performance standards will be updated following reviews)
ISSUE 1: ASSETS			
I1 The ability of the stormwater network to cost effectively meet the needs of current and future generations and achieve and maintain healthy receiving environments, is dependent on the design, quality, maintenance and renewal of built assets and their interaction with private networks and natural systems.	**Safe Communities:** Risk to our communities, including people, property and infrastructure is reduced - ensure that risk to people and property is managed to levels that have been established in consultation with the community, and reduce existing flood risk where it is above these levels. **Healthy and Connected Waterways that provide for te mauri o te wai:** Stream, groundwater and coastal water values are maintained and enhanced and communities are connected with them - utilise streams, aquifers and harbours as integral natural components of Auckland's stormwater system while reducing the adverse effects of stormwater runoff, restoring te mauri o te wai and enhancing our community's connection with, its waterways.	O1.1 Manage existing public stormwater assets to meet agreed levels of service. O1.2 Manage erosion effects caused by discharges from the public stormwater infrastructure. O1.3 Improve existing assets by taking the opportunities from redevelopment where they arise.	*Council Stormwater Infrastructure Performance Standards (all DC)* a) Survey 95% of critical assets every 5 years (AMP) b) Grade 4 critical assets will be repaired or renewed within 5 years (2015 - 2045 AMP) c) Grade 5 highly critical assets will be repaired or renewed within 24 months of identification (AMP) d) Number of blockages in the stormwater network per 100km will be less than 20 per annum (AMP) e) The number of complaints received about the performance of the stormwater network per 1000 properties connected to Auckland Council's stormwater network will be less than 3 per 1000 (LTP) f) Stormwater manholes that pop open in flood events are made safe within two hours: 100% (LTP) *Identified Reviews and Management Improvements for Managing the Council's stormwater infrastructure (all DC)* g) Review vesting processes to ensure that assets from proposed development meet the requirements of AUP, NDC and Stormwater Code of Practice - measured by annual audit of a sample of vested assets. Process improvements as identified through the audit h) Implement identified stormwater asset management improvement measures (ongoing Business as Usual (BAU)) i) Complete asset and risk assessment of public coastal (completed) and stream outfalls (WA programme) - 2017/18 watercourse assessments completed (Figure 9.5)

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ISSUE	OBJECTIVES	OUTCOMES	SIX YEAR TARGETS (LTP and AMP performance standards will be updated following reviews)
			j) Complete condition and risk assessments of large public stormwater dams (completed by 2023) k) Ongoing review of criticality strategies and assessments for all asset types. Renewal strategy has been completed; critical flood risk asset monitoring strategy in place. Improvements implemented as identified (BAU) l) Review complaints to identify potential issues and renewals (BAU, three yearly reporting of summary statistics from issues register) Note: Progress reporting on AMP targets will be undertaken via the Stormwater AMP *Collaboration with Stakeholders* m) Regularly engage with other infrastructure providers on collaborative redevelopment opportunities (Co) n) Implementation and review of the Stormwater Code of Practice and Bylaw (IC)
ISSUE 2: GROWTH			
I2 The way the region grows and develops, and our ability to address existing adverse effects, will determine the quality and health of our freshwater and marine environment.	**Support Growth:** Growth through water sensitive development and provision of quality stormwater infrastructure is enabled - new and re-developed areas are supported by effective stormwater management and good quality infrastructure and development is undertaken in a way that meets the needs of our communities and maintains and enhances natural water systems.	O2.1 Align stormwater infrastructure planning and provision to development and intensification priorities. O2.2 Integrate water sensitive design into new and major re-development. This can include promoting source control, at source treatment, bioretention, detention and attenuation, and protection and enhancement of streams.	*Council Stormwater Infrastructure Performance Standards (all DC)* a) Input into stormwater management plans, including those prepared by developers, in response to all high priority growth areas during structure planning and consenting processes b) 95% of formal enquires to stormwater development are responded to within 5 working days (AMP) c) At least 95% of annual capital works programme to enable growth is delivered (AMP) d) >$100,000 of other Council departments or CCOs growth projects are supported by the HW capital investment each year (AMP) *Identified Reviews and Management Improvements for Managing the Council's*

ISSUE	OBJECTIVES	OUTCOMES	SIX YEAR TARGETS (LTP and AMP performance standards will be updated following reviews)
		O2.3 Enable effective land use and stormwater management planning and co-operation between developers and infrastructure providers. O2.4 Establish clear standards and processes for the planning, and development of good quality public stormwater infrastructure, particularly in terms of minimising operational and renewal costs, as well as minimising community, environmental and cultural effects. Q2.5 Develop a coordinated process for management of stormwater approvals including NDC approvals, Stormwater Bylaw, AUP and Engineering Plan Approvals. Q2.6 Develop, in conjunction with industry, a practice note or engineering guideline for stormwater management requirements in a Brownfield development.	*public stormwater infrastructure* e) Provide updated guidance on the criteria for assets to be vested to Council and connections following approval of the NDC within one year of the granting of consent (DC) f) Facilitate stream rehabilitation through identification of opportunities for offsetting through growth (initial list of offsetting projects completed, ongoing update as new opportunities arise) (IC) *Collaboration with Stakeholders* g) Assist in the implementation of stormwater management/land use requirements under the AUP, including advocating for water sensitive design in new growth / major intensification areas (IC) h) Implementation and review of the Stormwater Code of Practice and Bylaw (IC) i) Assist in development and implementation of guidance on Water Sensitive Design; including Guideline GD04 (IC)
ISSUE 3: FLOODING			
I3 A large number of buildings (residential and commercial) and critical infrastructure are at risk of flooding and the	**Safe Communities:** Risk to our communities, including people, property and infrastructure is reduced - ensure that risk to people	O3.1 Avoid the increase of existing flooding or creation of new flooding of habitable floors as a result of urban	*Council Stormwater Infrastructure Performance Standard (all DC)* a) Council flood hazard GIS layer is maintained so that it is current and publicly available; reviewed on a two-yearly basis b) The number of flooding events and the associated number of habitable

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ISSUE	OBJECTIVES	OUTCOMES	SIX YEAR TARGETS (LTP and AMP performance standards will be updated following reviews)
problem will increase if past land use and development practices continue.	and property is managed to levels that have been established in consultation with the community, and reduce existing flood risk where it is above these levels.	development and intensification. O3.2 Reduce existing flood risk by taking the opportunities from redevelopment where they arise. O3.3 Manage existing flood risk to meet levels of service agreed to keep people and property safe from significant harm from flooding, and minimise disruption to critical social and physical infrastructure connections across the city. O3.4 Improved community understanding of, and resilience to, flood hazards.	floors affected: less than 1 per 1000 properties in Auckland per annum (LTP) c) Proportion of habitable floors protected from flooding in a 1 in 10-year storm: > 99% (AMP) d) Total habitable floors protected from flooding in a 1 in 100-year storm: > 97.5% (AMP) e) Median response time to attend a flooding event, measured from the time that Auckland Council receives notification to the time that service personnel reach site: < 2 hours (LTP) f) Major flood protection and control structures are maintained, repaired and renewed to a safe operating standard (AMP – mandatory national measure - however there are no such structures in Auckland) *Identified Reviews and Management Improvements for Managing the Council's public stormwater infrastructure* g) Provide updated guidance on the criteria for assets to be vested to Council following approval of the NDC (as above, within one year of the granting of consent) (DC) h) Flood resilience strategies are in place for habitable floors that are found to be unfeasible to protect from flooding within 10 years: >50% (IC) (AMP) *Collaboration with stakeholders-* i) Work with Civil Defence in identifying areas of flooding that pose a risk to life, as well as to critical infrastructure (Co) j) Assist in the implementation of stormwater management/land use requirements under Unitary Plan, including protection of floodplains and overland flowpaths to prevent flooding from new development (IC) k) Implementation and review of the Stormwater Code of Practice and Bylaw (IC) l) Assist in development and implementation of guidance on Water Sensitive Design, including Guideline GD04 (IC) m) Regularly engage with Local Boards regarding local flooding issues (Co)

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ISSUE	OBJECTIVES	OUTCOMES	SIX YEAR TARGETS (LTP and AMP performance standards will be updated following reviews)
			n) Regularly engage with other infrastructure providers on redevelopment opportunities and identification of critical infrastructure (Co)
ISSUE 4: STREAM HEALTH			
I4 Urbanisation and poor stormwater management adversely affects Auckland's urban streams and can cause a loss of aquatic habitat and biodiversity, resulting in biological degradation and impacts on ecological functioning of streams, on the community and on the mauri of freshwater and Maori customary uses of freshwater resources.	**Healthy and Connected Waterways that provide for te mauri o te wai:** Stream, groundwater and coastal water values are maintained and enhanced and communities are connected with them - utilise streams, aquifers and harbours as integral natural components of Auckland's stormwater system while reducing the adverse effects of stormwater runoff, restoring te mauri o te wai and enhancing our community's connection with, its waterways.	O4.1 Maintain, operate and develop Council's current and future public stormwater network to minimise and reduce adverse effects on streams, groundwater and coastal systems. O4.2 Enhance urban streams and waterways by working collaboratively with key stakeholders such as mana whenua, Local Boards, community groups and the development community to take opportunities where they arise. O4.3 Areas of significant indigenous biodiversity value in terrestrial, freshwater, and coastal marine areas are protected from the adverse effects of subdivision, use and development.	*Council Stormwater Infrastructure Performance Standards* a) Number of fish passage barriers mitigated: average 10 per year (DC) b) The ratio of the length of watercourse consented to be physically improved versus physically degraded in each year (kms Improved ÷ kms Degraded) 3 or more (LTP). (IC, Co, In) *Identified Reviews and Management Improvements for Managing the Council's public stormwater infrastructure* c) Complete asset and risk assessment of public coastal (completed) and stream outfalls (WA programme) - 2017/18 watercourse assessments completed (Figure 9.5) (DC) d) Complete a case study assessment of possible interventions on private streams, taking into account amongst other things ownership, liability and access issues within three years (DC) e) Implement Healthy Waters' Green Infrastructure Policy for Healthy Waters' capital works projects (ongoing BAU) (DC) f) Incorporate the Mauri model[1] into Healthy Waters' capital delivery project assessments - model developed, ongoing implementation for all significant projects (DC, Co) g) Develop a region wide decision support system to prioritise interventions for contaminant management purposes (part of Council's implementation of the NPSFM) and implement projects to improve water quality outcomes where opportunities are identified (completed by 2021) (DC)

[1] The Mauri-model is a best practice tool that can be used to effectively measure and assess cultural impacts of stormwater operations and programmes as part of the project scoping, prioritisation and cost-benefit analysis process. See All Issues/Collaborative Outcomes below – this tool will be developed in conjunction with Mana Whenua

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ISSUE	OBJECTIVES	OUTCOMES	SIX YEAR TARGETS (LTP and AMP performance standards will be updated following reviews)
			Collaboration with stakeholders h) Work with internal and external stakeholders to identify potential collaboration projects for the enhancement of streams (Co) i) Facilitate stream rehabilitation through identification of opportunities for offsetting through growth (initial list of offsetting projects completed, ongoing update as new opportunities arise) (IC) j) Assess feasibility of Council-wide database on stream information (Co) k) Assist in the education and implementation of guidance on Water Sensitive Design; this includes protection of streams, provision of riparian buffers and protection of base flow and other stream enhancement measures (IC) l) Engage with industry and Central Government on initiatives to consider the feasibility of, and where possible implement, source control of key stormwater contaminants.
ISSUE 5: COASTAL HEALTH			
I5 Stormwater contaminants, sourced from urban land use, stream erosion and transport activities, accumulate in low energy marine environments (such as estuaries and enclosed harbours) and in some areas, occur at levels that adversely affect marine life, community and Maori cultural values, and once diminished, affects Maori customary uses of coastal resources.	**Healthy and Connected Waterways that provide for te mauri o te wai:** Stream, groundwater and coastal water values are maintained and enhanced and communities are connected with them - utilise streams, aquifers and harbours as integral natural components of Auckland's stormwater system while reducing the adverse effects of stormwater runoff, restoring te mauri o te wai and enhancing our community's connection with, its waterways.	As for O4.1 above As for O4.2 above As for O4.3 above	*Council Stormwater Infrastructure Performance Standards* a) Volume of contaminants removed from the stormwater network via Auckland Councils maintenance and renewal programmes: 5,000 tons per annum for catchpits (AMP) (DC) b) Volume of contaminants removed from the stormwater network via Auckland Councils maintenance and renewal programmes: 10,000 tons per annum from de-silting ponds and wetlands (AMP) (DC) *Identified Reviews and Management Improvements for Managing the Council's public stormwater infrastructure* c) Provide updated guidance on the criteria for assets to be vested to Council and connections following approval of the NDC within one year of the granting of consent (IC) d) As for Stream Health: Develop a region wide decision support system to prioritise interventions for contaminant management purposes (part of Council's implementation of the NPSFM) and implement projects to improve

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ISSUE	OBJECTIVES	OUTCOMES	SIX YEAR TARGETS (LTP and AMP performance standards will be updated following reviews)
			water quality outcomes where opportunities are identified (completed by 2021) (DC) *Collaboration with stakeholders* e) Work with mana whenua and other parties to identify areas of safe consumption of kaimoana/mahinga kai and other aspects of coastal health and values (NPSFM –part of watershed implementation plans) (Co) f) Assist in the education and implementation of guidance on Water Sensitive Design; this includes provisions in respect of at-source reduction and on-site treatment and management of contaminant generating areas (IC) g) Engage with industry and Central Government on initiatives to consider the feasibility of, and where possible implement, source control of key stormwater contaminants.
ISSUE 6: GROUNDWATER			
I6 Groundwater aquifers underlying urban areas can be adversely affected by land development and stormwater discharges to ground soakage.	**Healthy and Connected Waterways that provide for te mauri o te wai:** Stream, groundwater and coastal water values are maintained and enhanced and communities are connected with them - utilise streams, aquifers and harbours as integral natural components of Auckland's stormwater system while reducing the adverse effects of stormwater runoff, restoring te mauri o te wai and enhancing our community's connection with, its waterways	As for O4.1 above As for O4.2 above	*Council Stormwater Infrastructure Performance Standards* a) As for Managing Effects on Coastal Health, focusing on managing contaminants to aquifers *Identified Reviews and Management Improvements for Managing the Council's public stormwater infrastructure* b) As for Managing Effects on Coastal Health, focusing on managing contaminants to aquifers c) Prepare guidance for soakage device design, including treatment requirements (TR2013/40 completed, ongoing implementation) *Collaboration with stakeholders* d) Assist in development and implementation of guidance on Water Sensitive Design; including recharge of high use aquifers, peat soils and stream baseflow (IC) e) Input into the implementation and review of the Stormwater Code of Practice and Bylaw (IC)

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ISSUE	OBJECTIVES	OUTCOMES	SIX YEAR TARGETS (LTP and AMP performance standards will be updated following reviews)
			f) Engage with industry and Central Government on initiatives to consider the feasibility of, and where possible implement, source control of key stormwater contaminants.
ISSUE 7: EFFECTS ON WASTEWATER SYSTEM			
I7 In parts of Auckland, particularly where there is a combined stormwater-wastewater network, flood waters are contaminated with wastewater which can cause a public health risk, especially in areas with high contact recreation, and affects the Mauri of the waterbody and thereby has an effect on social and Maori cultural values.	**Healthy and Connected Waterways that provide for te mauri o te wai:** Stream, groundwater and coastal water values are maintained and enhanced and communities are connected with them - utilise streams, aquifers and harbours as integral natural components of Auckland's stormwater system while reducing the adverse effects of stormwater runoff, restoring te mauri o te wai and enhancing our community's connection with, its waterways	As for O4.2 above	*Collaboration with stakeholders (all Co)* a) Develop a strategy for investigation and management of identified issues relating to cross contamination b) Collaborate with Watercare Services Ltd to identify the optimal solution to reduce overflows to the receiving environment for public and environmental health reasons for the central combined sewer area (Western Isthmus Water Quality Improvement Programme (WIWQIP) c) Regularly engage with Watercare Services Ltd and Building Control to identify and assess inflow and infiltration issues and collaboratively design and implement infrastructure upgrades
ISSUE 8: COMMON TO ALL ISSUES			
	Collaborative Outcomes: Stakeholders are engaged to achieve the best stormwater outcomes including for te mauri o te wai for present and future generations.	O8.1 Collaborate with Council departments and CCOs that have a key role in delivering positive stormwater outcomes. O8.2 Build constructive, working relationships with key stakeholders to achieve integrated stormwater solutions and cost effective outcomes. O8.3 Establish effective mechanisms for mana	*Council Stormwater Infrastructure Performance Standards (DC)* a) Proportion of mana whenua that are satisfied with Auckland Council's engagement with iwi in relation to stormwater projects: 10/19 or more (LTP) b) Percentage of projects that contribute to Maori outcomes: at least 95% (AMP) c) >$100,000 of other Council departments or CCOs growth projects are supported by the HW capital investment each year (AMP) d) Compliance with NDC – number of abatement notices, infringement notices, enforcement orders or successful prosecutions: 0 (zero) (AMP) *Identified Reviews and Management Improvements for Managing the Council's*

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ISSUE	OBJECTIVES	OUTCOMES	SIX YEAR TARGETS (LTP and AMP performance standards will be updated following reviews)
		whenua to be appropriately engaged in stormwater management. This includes recognising and actively working to operationalise and integrate the relationship and cultural values mana whenua have with their waterways O8.4 Work with the stormwater industry to continue to identify, refine and communicate best practice and increase industry capacity, resources and knowledge.	*public stormwater infrastructure* e) Take into account and be cognisant of current or future Iwi Management Plans (DC) *Collaboration with stakeholders (Co)* f) Develop and integrate, in partnership with mana whenua, best practice tools which can be used to effectively measure and assess cultural impacts of stormwater operations and programmes as part of the project scoping, prioritisation and cost-benefit analysis process (Mauri-model) - model developed, ongoing implementation for all significant projects g) Establish a draft process to operationalise and integrate the relationship and cultural values mana whenua have with their waterways. This includes annual reporting on mana whenua engagement efficacy in order to determine when engagement took place in a project, what the value of the input was, and how mana whenua feedback was (or was not) incorporated h) Regular engagement with iwi to assess implementation via the mana whenua hui
	Prioritised Investment: Benefits from limited resources are maximised by targeting our priorities to achieve the best outcomes we can afford	O8.5 Undertake regional prioritisation that targets investment in the right areas, as agreed within Council, with mana whenua and our community and in accordance with the Auckland Plan vision and statutory requirements. O8.6 Establish levels of service that are relevant and affordable.	
	Efficient Business: Robust systems, processes, practices and management are implemented to support delivery of stormwater services	O8.7 Undertake efficient and effective network operational, renewals and maintenance programmes. O8.8 Regionalise stormwater	*Council Stormwater Infrastructure Performance Standards (DC)* As per AMP targets above.

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ISSUE	OBJECTIVES	OUTCOMES	SIX YEAR TARGETS (LTP and AMP performance standards will be updated following reviews)
		management through harmonisation of standards, contracts and business processes. O8.9 Provide fit for purpose information systems and business tools. O8.10 Undertake efficient and effective response to customers and incidents. O8.11 Rationalise network consents and compliance requirements. O8.12 Monitor and report performance.	

Schedule 3: Best Practicable Option

BPO for Managing Assets

a)	**Issue definition**
The ability of the stormwater network to cost effectively meet the needs of current and future generations, and achieve and maintain healthy receiving environments at an affordable cost, is dependent on the design, quality, maintenance and renewal of built assets and their interaction with private networks and natural systems.	
b)	**Strategic Objective for Managing Assets**
Safe Communities: Risk to our communities, including people, property and infrastructure is reduced - ensure that risk to people and property is managed to levels that have been established in consultation with the community, and reduce existing flood risk where it is above these levels. **Healthy and Connected Waterways that provide for te mauri o te wai:** Stream, groundwater and coastal water values are maintained and enhanced and communities are connected with them - utilise streams, aquifers and harbours as integral natural components of Auckland's stormwater system while reducing the adverse effects of stormwater runoff, restoring te mauri o te wai and enhancing our community's connection with, its waterways.	
c)	**Proposed NDC Outcomes for Managing Assets**
▪ Manage existing public stormwater assets to meet agreed levels of service. ▪ Manage erosion effects caused by discharges from the public stormwater infrastructure. ▪ Improve existing assets by taking the opportunities from redevelopment where they arise.	
d)	**Stakeholder Feedback from CRE-based Consultation**
The consultation feedback relating to asset management from the four CREs was very closely aligned. There was a high level of support (94%, 74%, 78% and 72% of stakeholders from the Waitematā Harbour, Greater Tāmaki, Manukau Harbour and Hibiscus / East Coast Bays CREs respectively) for 'asset condition and criticality' as the key criterion that should be used to prioritise asset management expenditure. With respect to the Hibiscus / East Coast Bays CRE, the stakeholders wanted to see a focus on above ground built natural assets and stream assets. Managing impacts on existing communities was also seen as important in all CREs, and this criterion was ranked higher than asset condition and criticality in the Hibiscus / East Coast Bays CRE.	
e)	**Regional Prioritisation Processes to Identify Areas of Further Detailed Investigation for Potential Infrastructure Development and Upgrades**
▪ Regional asset renewal strategies (DC): Figure 9-3 depicts the results of the assessment completed under the regional asset renewal strategy for pipes. This identifies, at a high regional level, proportions of potentially critical pipes and the length of critical pipes in each catchment. Critical pipes have been defined based on parameters such as age and material, as well as factors such as their diameter, depth, proximity to critical infrastructure (such as hospitals), those underneath buildings or roads, in high density urban areas, in a landfill and in depressions. ▪ Within Growth Priority Areas, including as part of redevelopment opportunities with other infrastructure providers (refer Table 9 2) (IC, Co).	
f)	**Nature of Further Detailed Investigations and Potential Infrastructure Upgrades that may be Implemented to Address Confirmed Issues**
▪ Critical pipes will be subject to further assessment through CCTV monitoring and, where issues are confirmed, potential infrastructure upgrades will be investigated (DC). Potential infrastructure upgrades that can be used to address critical pipes include: ▫ Pipe rehabilitation/replacement ▫ Diversion a portion or the whole upstream catchment ▫ Increasing hydraulic capacity ▫ Extend existing reticulation system to un-reticulated properties ▫ Daylighting/naturalisation ▫ Improved channel conveyance The recommended upgrade for an area will be reviewed and selected based on a range of factors including feasibility of implementation, effectiveness, and cost, as well as opportunities for water sensitive solutions. It must be recognised that, after further investigation, some critical pipes may not be practically or economically resolved through infrastructure upgrade and therefore will need to be managed using other mechanisms.	

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g)	**Management Processes other than the Identification of Infrastructure Development and Upgrades**
The following management applies to all public stormwater infrastructure for managing assets: ▪ Ensure adequate asset maintenance of existing stormwater network through preventive and reactive programmes (DC). ▪ Enforce appropriate performance standards on connections/vested assets through the Stormwater Bylaw (IC). ▪ Maintain and update asset management database (DC). ▪ Continue to develop, review and implement criticality assessment strategies for all asset types (DC). ▪ Respond to complaints and regularly review complaints to identify potential issues and renewals (DC). ▪ Regularly work with other infrastructure providers on redevelopment opportunities, including incorporation of water sensitive design (Co). ▪ Work collaboratively with other departments and stakeholders when delivering projects to ensure that opportunities to add value and minimise disruption are realised (Co).	
h)	**Proposed six-year NDC targets**
Council Stormwater Infrastructure Performance Standards (all DC) a) Survey 95% of critical assets every 5 years (AMP). b) Grade 4 critical assets will be repaired or renewed within 5 years (2015 -2045 AMP). c) Grade 5 highly critical assets will be repaired or renewed within 24 months of identification (AMP). d) Number of blockages in the stormwater network per 100km will be less than 20 per annum (AMP). e) The number of complaints received about the performance of the stormwater network per 1000 properties connected to Auckland Council's stormwater network will be less than 3 per 1000 (LTP). f) Stormwater manholes that pop open in flood events are made safe within two hours: 100% (LTP). *Identified Reviews and Management Improvements for Managing the Council's stormwater infrastructure* g) Review vesting processes to ensure that assets from proposed development meet the requirements of AUP, NDC and Stormwater Code of Practice - measured by annual audit of a sample of vested assets. Process improvements as identified through the audit (DC). h) Implement identified stormwater asset management improvement measures (ongoing BAU) (DC). i) Complete asset and risk assessment of public coastal (completed) and stream outfalls (WA programme) - 2017/18 watercourse assessments completed (Figure 9.5) (DC). j) Complete condition and risk assessments of large public stormwater dams (completed by 2023) (DC). k) Ongoing review of criticality strategies and assessments for all asset types. Renewal strategy has been completed; critical flood risk asset monitoring strategy in place. Improvements implemented as identified (BAU) (DC). l) Review complaints to identify potential issues and renewals (BAU, three yearly reporting of summary statistics from issues register) (DC). Note: Progress reporting on AMP targets will be undertaken via the Stormwater AMP. *Collaboration with Stakeholders* m) Regularly engage with other infrastructure providers on collaborative redevelopment opportunities (Co). n) Implementation and review of the Stormwater Code of Practice and Bylaw (IC).	

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BPO for Managing the Effects of Growth

a)	**Issue definition**
The way the region grows and develops, and our ability to address existing adverse effects, will determine the quality and health of our freshwater and marine environment.	
b)	**Strategic Objective for Managing Effects of Growth**
Support Growth: Growth through water sensitive development and provision of quality stormwater infrastructure is enabled - new and re-developed areas are supported by effective stormwater management and good quality infrastructure and development is undertaken in a way that meets the needs of our communities and maintains and enhances natural water systems.	
c)	**Proposed NDC Outcomes for Managing Effects from Growth**
▪	Align stormwater infrastructure planning and provision to development and intensification priorities.
▪	Integrate water sensitive design into new and major re-development. This can include promoting source control, at source treatment, bioretention, detention and attenuation, and protection and enhancement of streams.
▪	Enable effective land use and stormwater management planning and co-operation between developers and infrastructure providers.
▪	Establish clear standards and processes for the planning, development and vesting of good quality public stormwater infrastructure, particularly in terms of minimising operational and renewal costs, as well as minimising community, environmental and cultural effects.
▪	Develop a coordinated process for management of stormwater approvals including NDC approvals, Stormwater Bylaw, AUP and Engineering Plan Approvals.
▪	Develop, in conjunction with industry, a practice note or engineering guideline for stormwater management requirements in a Brownfield development
d)	**Stakeholder Feedback from CRE-based Consultation**
In all four CREs, the 'sensitivity of the receiving environment' criterion was ranked highly in respect of prioritising stormwater resources for growth. In the Waitematā Harbour and Greater Tāmaki CREs, there was a clear preference for 'council-identified priorities' relating to growth and an emphasis on a 'partnership-led' approach to growth for the Hibiscus / East Coast Bays CRE. All three CREs showed a general lack of support (low ranking) for developer-led priorities. The Manukau Harbour CRE stakeholders, however, showed a high level of support for 'development-led' growth.	
e)	**Regional Prioritisation Processes to Identify Areas for Further Detailed Investigation of Potential Infrastructure Development and Upgrades**
▪	Alignment with Council Growth Priority Areas (IC) Healthy Waters will align its work with growth priority areas as identified by the council. The growth priority areas identified by Council in late 2015 are shown in Figure 9-4. These areas include Special Housing Areas (see Figure 3-4), and other development identified under the Forward Land and Infrastructure Programme (FLIP) and the Future Urban Land Supply Strategy (FULSS). It should be noted that these areas are periodically updated by Council, and as such Healthy Waters will need to review and realign programmes as work is delivered and priorities change.
f)	**Nature of Further Detailed Investigations and Potential Infrastructure Upgrades that may be Implemented to Address Confirmed Issues**
▪	Healthy Waters will work with Council planners, the Development Project Office and developers in the compiling stormwater management plans for these growth areas, promoting water sensitive design (IC).
▪	Heathy Waters will continue to deliver its capital works programme to support growth including renewals, upgrades and performance improvements.
g)	**Management Processes other than the Identification of Infrastructure Development and Upgrades**
The following management applies to all public stormwater infrastructure for managing growth:	
▪	Set out clear performance and connection standards for stormwater assets to be vested to Council from development or for new/modified connections (Schedule 4) (DC).
▪	Provide information to the development community such as flood modelling, design guidance and requirements, and clear asset information (IC).
▪	Work with other infrastructure providers to identify collaborative upgrade projects and redevelopment opportunities, including opportunities for incorporating water sensitive design (CO).

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▪	Work collaboratively with other departments and stakeholders when delivering projects to ensure that opportunities to add value and minimise disruption are realised (CO).
▪	Refine and communicate guidance on stormwater management plan requirements (DC)
h)	**Proposed six-year NDC targets**
Council Stormwater Infrastructure Performance Standards (all DC)	
a)	Input into stormwater management plans, including those prepared by developers, in response to all high priority growth areas during structure planning and consenting processes.
b)	95% of formal enquires to stormwater development are responded to within 5 working days (AMP).
c)	At least 95% of annual capital works programme to enable growth is delivered (AMP).
d)	>$100,000 of other Council departments or CCO's growth projects are supported by the HW capital investment each year (AMP).
Identified Reviews and Management Improvements for Managing the Council's public stormwater infrastructure	
e)	Provide updated guidance on the criteria for assets to be vested to Council and connections following approval of the NDC within one year of the granting of consent (DC).
f)	Facilitate stream rehabilitation through identification of opportunities for offsetting through growth (initial list of offsetting projects completed, ongoing update as new opportunities arise) (IC/Co).
Collaboration with Stakeholders	
g)	Assist in the implementation of stormwater management/land use requirements under the AUP, including advocating for water sensitive design in new growth / major intensification areas (IC).
h)	Implementation and review of the Stormwater Code of Practice and Bylaw (IC).
i)	Assist in the development and implementation of guidance on Water Sensitive Design, including Guideline GD04 (IC).

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BPO for Managing Flooding

a)	**Issue definition**
A large number of buildings (residential and commercial) and critical infrastructure are at risk of flooding and the problem will increase if past land use and development practices continue.	
b)	**Strategic Objectives for Managing Flooding**
Safe Communities: Risk to our communities, including people, property and infrastructure is reduced - ensure that risk to people and property is managed to levels that have been established in consultation with the community, and reduce existing flood risk where it is above these levels.	
c)	**Proposed NDC Outcomes for Managing Flooding**
▪	Avoid the increase of existing flooding or creation of new flooding of habitable floors as a result of urban development and intensification.
▪	Reduce existing flood risk by taking the opportunities from redevelopment where they arise.
▪	Manage existing flood risk to meet levels of service agreed to keep people and property safe from significant harm from flooding, and minimise disruption to critical social and physical infrastructure connections across the city.
▪	Improve community understanding of, and resilience to, flood hazards.
d)	**Stakeholder Feedback from CRE-based Consultation**
Whilst initially it appears that the stakeholders in each CRE have a different perspective on the importance of the criteria, 'flooding occurrence/frequency' has the highest percentage of stakeholders ranking it as high. It is noted that the criterion 'public safety and protecting critical infrastructure' is not fully comparable across all four CREs as this was a new criterion introduced through the Greater Tāmaki, Manukau Harbour and Hibiscus / East Coast Bays consultation processes. However, the results show that this is of very high importance to stakeholders in these three CREs.	
e)	**Regional Prioritisation Processes to Identify Areas for Further Detailed Investigation of Potential Infrastructure Development and Upgrades**
▪	Within Growth Priority Areas, including as part of redevelopment opportunities with other infrastructure providers (refer Table 9 2) (IC, Co). Modelling is key to understanding the potential effect of new areas of growth on flood risks to both existing dwellings and new development, and is a fundamental component of growth stormwater management planning. Maintaining up to date flood modelling for growth areas is therefore a priority.
▪	Regional assessment of number of habitable floors affected by a 100-year flood event (DC). Regional assessments have been completed to identify, at a high regional level, the stream catchments with the highest potential number of habitable floors at risk of flooding in the 100-year rain event. This is based on regional modelling undertaken for the 100-year floodplain, overland flowpath, and flood prone areas.
f)	**Nature of Further Detailed Investigations and Potential Infrastructure Upgrades that may be Implemented to Address Confirmed Issues**
▪	Modelling is updated to ensure it remains fit for purpose and provides the best available information for asset renewal/upgrade and consent and development needs. This is a continual and cyclical process as catchment changes (new development, infrastructure changes etc) occur. Flood hazard maps are made available on Council GIS system. (DC).
▪	Infrastructure upgrades will be investigated for areas with a high demand for growth, as well as the highest numbers of habitable floors affected in the region or as opportunities arise through redevelopment (DC). If after the detailed modelling, flooding issues are confirmed to be the result of the public stormwater infrastructure, potential upgrades will be investigated and assessed. The types of infrastructure upgrades that can be put in place to address flooding include: ▫ Constructed wetlands/ponds designed for detention ▫ Divert a portion or the whole upstream catchment ▫ Pipe rehabilitation, increasing hydraulic capacity and extend existing reticulation system to un-reticulated properties ▫ Install debris barrier or screen ▫ Provision of primary /secondary drainage systems/ overland flow paths ▫ Construction of stopbanks and floodways ▫ Daylighting/ naturalisation

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- Improved channel conveyance.

The recommended infrastructure upgrade selected will be dependent on various factors including feasibility of implementation, effectiveness, and cost, and include opportunities for water sensitive design/green infrastructure options. It should be recognised that after further investigation, some flooding may not be practically or economically resolved through infrastructure upgrades and therefore will need to be managed using other mechanisms.

g) Management Processes other than the Identification of Infrastructure Development and Upgrades

The following management applies to all public stormwater infrastructure, including within non-priority areas:

- Ensure adequate asset maintenance of existing stormwater network through preventive and reactive programmes, particularly in flooding hotspot areas. This includes catchpit cleaning and clearing of high risk inlets (DC).
- Enforce appropriate performance standards on connections/vested assets through the Stormwater Bylaw (IC).
- Assist in the enforcement of appropriate design standards and building controls on private properties (e.g. vehicle crossings, building floor levels, overland flow paths) through the Stormwater Bylaw, particularly in flooding hotspot areas or areas that are likely to be susceptible to flooding (IC).
- Provide flood modelling, design guidance/requirements, vesting requirements, and clear asset information (DC).
- Develop flood resilience strategies for habitable floors that are found to be unfeasible to protect from flooding (DC).
- Assist Civil Defence in flood prediction and warning, as well as in flood recovery planning (Co).
- Work with other infrastructure providers on identifying and addressing flooding through redevelopment opportunities, as well as the identification of critical infrastructure (Co).
- Work collaboratively with other departments and stakeholders when delivering projects to ensure that opportunities to add value and minimise disruption are realised (Co).
- Engage with Local Boards to identify any ongoing flooding issues (Co).

h) Proposed six-year NDC targets

Council Stormwater Infrastructure Performance Standard (all DC)

a) Council flood hazard GIS layer is maintained so that it is current and publicly available; reviewed on a two-yearly basis.

b) The number of flooding events and the associated number of habitable floors affected: less than 1 per 1000 properties in Auckland per annum (LTP).

c) Proportion of habitable floors protected from flooding in a 1 in 10-year storm: > 99% (AMP).

d) Total habitable floors protected from flooding in a 1 in 100-year storm: > 97.5% (AMP).

e) Median response time to attend a flooding event, measured from the time that Auckland Council receives notification to the time that service personnel reach site: < 2 hours (LTP).

f) Major flood protection and control structures are maintained, repaired and renewed to a safe operating standard (AMP– mandatory national measure - however there are no such structures in Auckland).

Identified Reviews and Management Improvements for Managing the Council's public stormwater infrastructure

g) Provide updated guidance on the criteria for assets to be vested to Council following approval of the NDC (as above, within one year of the granting of consent) (IC).

h) Flood resilience strategies are in place for habitable floors that are found to be unfeasible to protect from flooding within 10 years: >50% (In) (AMP).

Collaboration with stakeholders-

i) Work with Civil Defence in identifying areas of flooding that pose a risk to life, as well as to critical infrastructure (Co).

j) Assist in the implementation of stormwater management/land use requirements under the Unitary Plan, including protection of floodplains and overland flowpaths to prevent flooding from new development (IC).

k) Implementation and review of the Stormwater Code of Practice and Bylaw (IC).

l) Assist in development and implementation of guidance on Water Sensitive Design, including Guideline GD04 (IC).

m) Regularly engage with Local Boards regarding local flooding issues (Co).

n) Regularly engage with other infrastructure providers on redevelopment opportunities and identification of critical infrastructure (Co).

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BPO for Managing Effects on Stream Health

a)	**Issue definition**
Urbanisation and poor stormwater management adversely affects Auckland's urban streams and can cause a loss of aquatic habitat and biodiversity, resulting in biological degradation and impacts on ecological functioning of streams, on the community and on the mauri of freshwater and Maori customary uses of freshwater resources.	
b)	**Strategic Objective for Managing Effects on Stream Health**
Healthy and Connected Waterways that provide for te mauri o te wai: Stream, groundwater and coastal water values are maintained and enhanced and communities are connected with them - utilise streams, aquifers and harbours as integral natural components of Auckland's stormwater system while reducing the adverse effects of stormwater runoff, restoring te mauri o te wai and enhancing our community's connection with, its waterways.	
c)	**Proposed NDC Outcomes for Managing Effects on Stream Health**
▪ Maintain, operate and develop Council's current and future public stormwater network to minimise and reduce adverse effects on streams, groundwater and coastal systems. ▪ Enhance urban streams and waterways by working collaboratively with key stakeholders such as mana whenua, Local Boards, community groups and the development community to, take opportunities to where they arise. ▪ Areas of significant indigenous biodiversity value in terrestrial, freshwater, and coastal marine areas are protected from the adverse effects of subdivision, use and development.	
d)	**Stakeholder Feedback from CRE-based Consultation**
In general, the feedback relating to urban stream management and freshwater resources was relatively consistent across the CREs. The 'ecological value/ greatest ecological benefit' and 'opportunities to leverage outcomes' criteria received the most support from stakeholders. A new criterion, 'holistic management of streams' was introduced as part of the Greater Tāmaki, Manukau Harbour and Hibiscus / East Coast Bays CRE consultation processes, which also received a high level of support in all three CREs.	
e)	**Regional Prioritisation Processes to Identify Areas for Further Detailed Investigation of Potential Infrastructure Development and Upgrades**
▪ Within Growth Priority Areas, including as part of redevelopment opportunities (IC, Co). Healthy Waters uses Watercourse Assessments (previously called Watercourse Management Plans and Stream Surveys) to identify issues within streams, such as fish barriers, erosion, and status of ecological health. Healthy Waters is also actively working with developers to retain and enhance stream values, particularly in new growth areas. ▪ Identified adverse effects caused by public infrastructure located on public land (DC). Issues identified through Watercourse Assessments are entered in a central database for, where relevant and associated with the operation and management of the stormwater network, programming and action.	
f)	**Nature of Further Detailed Investigations and Potential Infrastructure Upgrades that may be Implemented to Address Confirmed Issues**
▪ Current priority is the investigation and remediation of Council-owned infrastructure related issues, particularly outfall erosion. ▪ An on-going regional programme of remediating fish passage barriers is currently being implemented. ▪ Issues associated with undertaking works in private streams is currently being reviewed, as matters such as future responsibilities, ease of access, and ability to create easements to allow for future access for maintenance are key considerations that must be managed. ▪ Issues identified in Watercourse Assessments are also reported to other stakeholders. Opportunities for partnering are encouraged, and Healthy Waters works collaboratively in delivering some of these. Potential infrastructure upgrades to address effects on streams can include: ▫ Outfall rehabilitation, debris barrier or screen ▫ Removal of barriers to fish passage ▫ Daylighting, channel naturalisation, riparian enhancement ▫ Reduce peak flows by constructed wetlands/ ponds, rain garden ▫ Manage flows, including base flows, by rain tanks, vegetated swales, rain gardens, permeable paving etc. The specific upgrade selected will be dependent on various factors including feasibility of implementation, effectiveness, and cost, and includes the assessment of water sensitive design/green infrastructure options. It should be recognised that some effects on streams may not be practically or economically resolved through infrastructure upgrades and therefore will need to be managed using other mechanisms (see below).	

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g)	**Management Processes other than the Identification of Infrastructure Development and Upgrades**
The following management applies to all public stormwater infrastructure: ▪ Apply appropriate performance standards on connections/vested assets through the Stormwater Bylaw (IC). ▪ Ensure adequate asset maintenance of the existing stormwater network through preventive (proactive) and reactive programmes (DC). ▪ Support public education programmes to: enhance riparian planting, maintain private streams, discourage litter, preventing illegal dumping of contaminants (e.g. chemicals, paint, and yard waste) into storm drains discharging to streams (In). ▪ Complete and implement findings of assessment of possible interventions on private streams, taking into account amongst other things ownership, liability and access issues (DC, Co). ▪ Implement Healthy Waters' Green Infrastructure Policy to its capital works projects and expand it to include the Mauri model (see below) (DC, Co). ▪ Assist in the education and implementation of guidance on Water Sensitive Design Guideline (GD04) and other educational material for schools and community groups (IC). ▪ Work collaboratively with other departments and stakeholders when delivering projects to ensure that opportunities to add value and minimise disruption are realised (Co). ▪ Work with stakeholders such as the other Council teams, CCOs, Local Boards and iwi through to identify and implement potential collaboration projects for the enhancement of streams (Co).	
h)	**Proposed six-year NDC targets**
Council Stormwater Infrastructure Performance Standards a) Number of fish passage barriers mitigated: average 10 per year (DC). b) The ratio of the length of watercourse consented to be physically improved versus physically degraded in each year (kms Improved ÷ kms Degraded) 3 or more (LTP) (IC, Co, In). *Identified Reviews and Management Improvements for Managing the Council's public stormwater infrastructure* c) Complete asset and risk assessment of public coastal (completed) and stream outfalls (WA programme) - 2017/18 watercourse assessments completed (Figure 9.5) (DC). d) Complete a case study assessment of possible interventions on private streams, taking into account amongst other things ownership, liability and access issues within three years (DC). e) Implement Healthy Waters' Green Infrastructure Policy for Healthy Waters' capital works projects (ongoing BAU) (DC). f) Incorporate the Mauri model into Healthy Waters' capital delivery project assessments - model developed, ongoing implementation for all significant projects (DC). g) Develop a region wide decision support system to prioritise interventions for contaminant management purposes (part of Council's implementation of the NPSFM) and implement projects to improve water quality outcomes where opportunities are identified (completed by 2021) (DC). *Collaboration with stakeholders* h) Work with internal and external stakeholders to identify potential collaboration projects for the enhancement of streams (Co). i) Facilitate stream rehabilitation through identification of opportunities for offsetting through growth (initial list of offsetting projects completed, ongoing update as new opportunities arise) (IC). j) Assess feasibility of Council-wide database on stream information (Co). k) Assist in the education and implementation of guidance on Water Sensitive Design; this includes protection of streams, provision of riparian buffers and protection of base flow and other stream enhancement measures (IC). l) Engage with industry and Central Government on initiatives to consider the feasibility of, and where possible implement, source control of key stormwater contaminants.	

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BPO for Managing Effects on Coastal Health

a)	**Issue definition**
Stormwater contaminants, sourced from urban land use, stream erosion and transport activities, accumulate in low energy marine environments (such as estuaries and enclosed harbours) and in some areas, occur at levels that adversely affect marine life, community and Maori cultural values, and once diminished, affects Maori customary uses of coastal resources.	
b)	**Strategic Objective for Managing Effects on Coastal Health**
Healthy and Connected Waterways that provide for te mauri o te wai: Stream, groundwater and coastal water values are maintained and enhanced and communities are connected with them - utilise streams, aquifers and harbours as integral natural components of Auckland's stormwater system while reducing the adverse effects of stormwater runoff, restoring te mauri o te wai and enhancing our community's connection with, its waterways.	
c)	**Proposed NDC Outcomes for Managing Effects on Coastal Health**
▪ Maintain, operate and develop Council's current and future public stormwater network to minimise and reduce adverse effects on streams, groundwater and coastal systems. ▪ Enhance urban waterways by working collaboratively with key stakeholders such as mana whenua, Local Boards, community groups and the development community to take opportunities where they arise. ▪ Areas of significant indigenous biodiversity value in terrestrial, freshwater, and coastal marine areas are protected from the adverse effects of subdivision, use and development.	
d)	**Stakeholder Feedback from CRE-based Consultation**
There was consistency in the ranking of criteria for contaminant management in the marine receiving environment for the four CREs. It highlights that there should be a general focus on 'contaminant loads and dispersal' and 'marine ecology' when prioritising future expenditure. It is interesting to note that managing existing contaminant levels was particularly important for stakeholders within the Hibiscus / East Coast Bays CRE. 'Holistic contaminant management' ranks high for the Manukau Harbour CRE. This is likely due to the high level of concern voiced by stakeholders over wastewater contaminating the Manukau Harbour.	
e)	**Regional Prioritisation Processes to Identify Areas for Further Detailed Investigation of Potential Infrastructure Development and Upgrades Investigation**
▪ Assessment based on criteria to be developed through the implementation of the NPSFM (DC). Council is progressing its implementation of the NPSFM. An element of this is the development of a region wide decision support system to prioritise interventions for contaminant management purposes.	
f)	**Nature of Further Detailed Investigations and Potential Infrastructure Upgrades that may be Implemented to Address Confirmed Issues**
The proposed next step is to develop a region wide decision support system to prioritise interventions for contaminant management as part of the NPSFM implementation. In addition to identified stormwater management interventions, opportunities for stormwater quality improvements will be assessed as part of stormwater capital works projects. Where stormwater infrastructure issues and opportunities are confirmed, potential upgrades will be investigated. These can comprise: ▪ Larger scale treatment such as constructed wetlands, ponds and swales ▪ Smaller scale management devices targeting small areas, such as: sand filters and rain gardens, permeable paving ▪ Soakage pre-treatment ▪ Debris barrier or coarse pollutant screen ▪ Propriety treatment devices, such as StormFilter™, UpFlo™ Filter, CDS Filternator™, CDS Unit, CleansAll Unit, Downstream Defender, Tetra traps etc. Recommended upgrades to mitigate existing adverse effects will be dependent on various factors including feasibility of implementation, effectiveness, and cost. Water sensitive design/green infrastructure will be considered. It should be recognised that contaminant mitigation may not be practically or economically resolved through infrastructure upgrades and therefore will need to be managed using other mechanisms (such as land use change/redevelopment).	
g)	**Management Processes other than the Identification of Infrastructure Development and Upgrades**
The following management applies to all public stormwater infrastructure, including within non-priority areas: ▪ Apply appropriate performance standards on connections/vested assets through the Stormwater Bylaw (IC). ▪ Ensure adequate maintenance of the existing stormwater network, including catchpit cleaning and maintenance/rehabilitation of treatment ponds, wetlands and other treatment devices (DC).	

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- Support public education programmes to enhance riparian planting, maintain private streams, discourage littering, and to prevent illegal dumping of contaminants (e.g. chemicals, paint, and yard waste) into storm drains discharging to sea (In).
- Assist in the education and implementation of guidance on Water Sensitive Design Guideline (GD04) and the development and implementation of future WSD design guidance (IC).
- Work collaboratively with other departments and stakeholders when delivering projects to ensure that opportunities to add value and minimise disruption are realised (Co).
- Work with stakeholders such as the other Council teams, CCOs, Local Boards and iwi through to identify potential collaboration projects (Co).

h) **Proposed 6 yearly NDC targets**

Council Stormwater Infrastructure Performance Standards

a) Volume of contaminants removed from the stormwater network via Auckland Council's maintenance and renewal programmes: 5,000 tons per annum for catchpits (AMP) (DC).

b) Volume of contaminants removed from the stormwater network via Auckland Council's maintenance and renewal programmes: 10,000 tons per annum from de-silting ponds and wetlands (AMP) (DC).

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c) Provide updated guidance on the criteria for assets to be vested to Council and connections following approval of the NDC within one year of the granting of consent (IC).

d) As for stream health:

Develop a region wide decision support system to prioritise interventions for contaminant management purposes (part of Council's implementation of the NPSFM) and implement projects to improve water quality outcomes where opportunities are identified (DC).

Collaboration with stakeholders

e) Work with mana whenua and other parties to identify areas of safe consumption of kaimoana/mahinga kai and other aspects of coastal health and values (NPSFM –part of watershed implementation plans) (Co).

f) Assist in the education and implementation of guidance on Water Sensitive Design; this includes provisions in respect of at-source reduction and on-site treatment and management of contaminant generating areas (IC).

g) Engage with industry and Central Government on initiatives to consider the feasibility of, and where possible implement, source control of key stormwater contaminants.

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BPO for Managing Effects on Groundwater

a)	**Issue definition**
Groundwater aquifers underlying urban areas can be adversely affected by land development and untreated stormwater discharges to ground soakage.	
b)	**Strategic Objective for Managing Effects on Groundwater**
Healthy and Connected Waterways that provide for te mauri o te wai: Stream, groundwater and coastal water values are maintained and enhanced and communities are connected with them - utilise streams, aquifers and harbours as integral natural components of Auckland's stormwater system while reducing the adverse effects of stormwater runoff, restoring te mauri o te wai and enhancing our community's connection with, its waterways.	
c)	**Proposed NDC Outcomes for Managing Effects on Groundwater**
▪	Maintain, operate and develop Council's current and future public stormwater network to minimise and reduce adverse effects on streams, groundwater and coastal systems.
▪	Enhance urban waterways by working collaboratively with key external stakeholders such as mana whenua, Local Boards, community groups and the development community to take opportunities where they arise.
d)	**Stakeholder Feedback from CRE-based Consultation**
In all four CREs, 'treatment/ disposal of stormwater into ground' was ranked as the highest criterion for prioritisation. This criterion supported the general feedback received from stakeholders in the CREs who felt a precautionary management approach to stormwater disposal to ground should be adopted.	
e)	**Regional Prioritisation Processes to Identify Areas for Further Detailed Investigation for Potential Infrastructure Development and Upgrades**
▪	Assessment based on contaminant loading and receiving environment (quality sensitive aquifers). The Auckland Unitary Plan has identified water quality sensitive aquifers in the region. The priority for further assessment are those quality sensitive aquifers that are utilised for stormwater disposal primarily the Auckland Isthmus volcanic aquifers and Pukekohe volcanic aquifers.
f)	**Nature of Further Detailed Investigations and Potential Infrastructure Upgrades that may be Implemented to Address Confirmed Issues on Groundwater**
Infrastructure upgrades to manage effects on groundwater health can include measures such as: ▪ Soakage pre-treatment, utilising a range of treatment devices. Recommended upgrades to mitigate adverse effects will be dependent on various factors including feasibility of implementation, effectiveness, and cost, and will include water sensitive design opportunities.	
g)	**Management Processes other than the Identification of Infrastructure Development and Upgrades**
The following management applies to all public stormwater infrastructure: ▪ Enforce appropriate design standards and building controls on private properties (e.g through soakage) through the Stormwater Bylaw/Building Act (IC). ▪ Ensure adequate asset maintenance of existing stormwater network through preventive and reactive programmes, in particular through catchpit cleaning in soakage areas (DC). ▪ Support public education programmes to enhance riparian planting, maintain private streams, discourage of litter, preventing illegal dumping of contaminants (e.g. chemicals, paint, and yard waste) into storm drains discharging to groundwater (In). ▪ Assist in the education and implementation of guidance on Water Sensitive Design Guideline (GD04) and the development and implementation of future WSD design guidance (IC). ▪ Work with stakeholders such as the other Council teams, CCOs, Local Boards and iwi through to identify potential collaboration projects (Co).	
h)	**Proposed six-year NDC targets**
Council Stormwater Infrastructure Performance Standards a) As for Managing Effects on Coastal Health, focusing on managing contaminants to aquifers. *Identified Reviews and Management Improvements for Managing the Council's public stormwater infrastructure* b) As for Managing Effects on Coastal Health, focusing on managing contaminants to aquifers. c) Prepare guidance for soakage device design, including treatment requirements (TR2013/40 completed, ongoing implementation) (DC).	

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Collaboration with stakeholders

d) Assist in development and implementation of guidance on Water Sensitive Design; including recharge of high use aquifers, peat soils and stream baseflow (IC).

e) Input into the implementation and review of the Stormwater Code of Practice and Bylaw (IC).

f) Engage with industry and Central Government on initiatives to consider the feasibility of, and where possible implement, source control of key stormwater contaminants.

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BPO for Managing the effects on wastewater network

a)	**Issue definition**
In parts of Auckland, particularly where there is a combined stormwater-wastewater network, flood waters are contaminated with wastewater which can cause a public health risk, especially in areas with high contact recreation, and affects the Mauri of the waterbody and thereby has an effect on social and Maori cultural values.	
b)	**Strategic Objective for Managing Effects on the Wastewater Network**
Healthy and Connected Waterways that provide for te mauri o te wai: Stream, groundwater and coastal water values are maintained and enhanced and communities are connected with them - utilise streams, aquifers and harbours as integral natural components of Auckland's stormwater system while reducing the adverse effects of stormwater runoff, restoring te mauri o te wai and enhancing our community's connection with, its waterways.	
c)	**Proposed NDC Outcomes for Managing Effects on the Wastewater Network**
▪	Enhance urban waterways by working collaboratively with key stakeholders such as mana whenua, Local Boards, community groups and the development community to take opportunities where they arise.
d)	**Stakeholder Feedback from CRE-based Consultation**
Stakeholders from all CREs ranked 'public health risk' and 'environmental risk' as the two highest criteria for prioritising stormwater effects on the wastewater network. It is interesting to note, however, that stakeholders in the Greater Tāmaki and Hibiscus / East Coast Bays CREs ranked 'environmental risk' higher that 'public health risk'. Despite this, the percentage of stakeholders ranking each of the criteria as "high" was very similar. A lower percentage of stakeholders from the Manukau Harbour and Hibiscus/ East Coast Bays CREs ranked these two criteria as high.	
e)	**Regional Prioritisation Processes to Identify Areas for Further Detailed Investigation of Potential Infrastructure Development and Upgrades**
Infrastructure upgrades to the wastewater network will be led by Watercare Services Ltd, with Healthy Waters assisting where it can effectively contribute to improved outcomes.	
f)	**Nature of Further Detailed Investigations and Potential Infrastructure Upgrades that may be Implemented to Address Confirmed Issues**
Infrastructure upgrades to the wastewater network will be led by Watercare Services Ltd, with Healthy Waters assisting where it can effectively contribute to improved outcomes. This includes a joint project to identify the optimal solution to reduce overflows to the receiving environment for public and environmental health reasons for the central combined sewer area (WIWQIP).	
g)	**Management Processes other than the Identification of Infrastructure Development and Upgrades**
The following management applies to all public stormwater infrastructure: ▪ Work with building control where wastewater infiltration and cross connections have been identified within areas that do not have combined sewers (Co). ▪ Increasing public awareness around the potential health risks associated with all flood waters, working with Watercare Services Ltd and Civil Defence on this matter (In, Co).	
h)	**Proposed six- year NDC targets**
Collaboration with stakeholders (all Co)	
a)	Develop a strategy for investigation and management of identified issues relating to cross contamination.
b)	Collaborate with Watercare Services Ltd to identify the optimal solution to reduce overflows to the receiving environment for public and environmental health reasons for the central combined sewer area (WIWQIP).
c)	Regularly engage with Watercare Services Ltd and Building Control to identify and assess inflow and infiltration issues and collaboratively design and implement infrastructure upgrades.

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Supporting Strategic Objectives, Outcomes and Targets for all Issues

a) **Strategic Objective - Collaborative Outcomes:**
Stakeholders are engaged to achieve the best stormwater outcomes including for te mauri or te wai for present and future generations.
Supporting Outcomes for Collaborative Outcomes ▪ Collaborate with Council departments and CCOs that have a key role in delivering positive stormwater outcomes. ▪ Build constructive, working relationships with key stakeholders to achieve integrated stormwater solutions and cost effective outcomes. ▪ Establish effective mechanisms for mana whenua to be appropriately engaged in stormwater management. This includes recognising and actively working to operationalise and integrate the relationship and cultural values mana whenua have with their waterways. ▪ Work with the stormwater industry to continue to identify, refine and communicate best practice and increase industry capacity, resources and knowledge. **Six-year Targets** In addition to the collaboration targets listed in Tables 9-1 to 9-7 above: a) Proportion of mana whenua that are satisfied with Auckland Council's engagement with iwi in relation to stormwater projects: 10/19 or more (LTP). b) Percentage of projects that contribute to Maori outcomes: at least 95% (AMP). c) >$100,000 of other Council departments or CCOs growth projects are supported by the HW capital investment each year (AMP). *Actions for Collaborative Outcomes* d) Take into account and be cognisant of current or future Iwi Management Plans (DC). e) Develop and integrate, in partnership with mana whenua, best practice tools which can be used to effectively measure and assess cultural impacts of stormwater operations and programmes as part of the project scoping, prioritisation and cost-benefit analysis process (Mauri-model) - model developed, ongoing implementation for all significant projects (Co). f) Establish a draft process to operationalise and integrate the relationship and cultural values mana whenua have with their waterways. This includes annual reporting on mana whenua engagement efficacy in order to determine when engagement took place in a project, what the value of the input was, and how mana whenua feedback was (or was not) incorporated (Co). g) Regular engagement with iwi to assess implementation via the mana whenua hui (Co).
b) Strategic Objective - Prioritised Investment:
Benefits from limited resources are maximised by targeting our priorities to achieve the best outcomes we can afford.
Supporting Outcomes for Prioritised Investment ▪ Undertake regional prioritisation that targets investment in the right areas, as agreed within Council, with mana whenua and our community and in accordance with the Auckland Plan vision and statutory requirements. ▪ Establish levels of service that are relevant and affordable. **Six Year Targets and Actions for Prioritised Investment** a) As for Collaborative Outcomes above.
c) Strategic Objective - Efficient Business:
Robust systems, processes, practices and management are implemented to support delivery of stormwater services.
Supporting Outcomes for Efficient Business ▪ Undertake efficient and effective network operational, renewals and maintenance programmes. ▪ Regionalise stormwater management through harmonisation of standards, contracts and business processes. ▪ Provide fit for purpose information systems and business tools. ▪ Undertake efficient and effective response to customers and incidents. ▪ Rationalise network consents and compliance requirements. ▪ Monitor and report performance. **Six-year Target** a) Compliance with NDC – number of abatement notices, infringement notices, enforcement orders or successful prosecutions: 0 (zero) (AMP).

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Schedule 4: Requirements for changes to be authorised under the Auckland Stormwater Network Discharge Consent

Council renewal, maintenance and upgrade works[2]			
1. No new/additional habitable floor affected by flooding in 1% AEP event and no increase in frequency of existing flooding 2. No significant increase in risk to the operation and structural integrity of other infrastructure in 1% AEP event 3. No increase in inundation that affects a building on property in 10% AEP 4. No loss in overland flow path capacity, unless provided by other means 5. All major capital works projects consider, and where appropriate implement, a green infrastructure option in accordance with the Healthy Waters Green Infrastructure Policy 6. Significant erosion at a (pubic stormwater) outfall, which is the result of the operation of that outfall, is remedied/stabilised 7. Appropriate erosion protection/mitigation is provided for any new outfall in accordance with the Stormwater Code of Practice 8. Where stormwater is directed to a different receiving environment then the change in discharge: - Does not decrease water quality in the receiving environment;-or - Is not predicted, by modelling or other suitable method, to result in increased stream erosion Where any of the above performance requirements cannot be achieved for a given project, alternative levels of performance are to be established in a Stormwater Management Plan that is certified by the Manager, Auckland Council Regulatory Services or delegate. The alternative may be certified if it meets the NDC Outcomes (Schedule 2), to the extent practicable applies an Integrated Stormwater Management Approach and is the best practicable option for the given project.			
Connection Requirements – Private Development			
Issue/Receiving Environment	**Brownfields small**	**Brownfields large – 20 lots or over new/re-developed 5,000m² impervious surface**	**Greenfield**
Catchments/areas			
Within area covered by adopted SMP[3] (Schedule 10)	▪ Stormwater management or connection requirements in accordance with the SMP Note that where specifically addressed in a SMP these requirements supersede any performance requirements below		
In other areas	Requirements below are met; or ▪ Where requirements cannot be met, a SMP that includes supporting information that demonstrates the best	A SMP detailing the Best Practicable Option[4] that addresses: ▪ The management approach/ key elements including: - Areas of development, including roads and reserves - Location of vested infrastructure, including green infrastructure (note that assets	

[2] Note: These projects do not create impervious area, but rather affect how stormwater is conveyed and discharged. Development that creates impervious area is covered by the *vesting/connection* requirements for Brownfield and Greenfield development.

[3] Stormwater Management Plan. These include Integrated Catchment Management Plans or similar where they have been adopted under this consent.

[4] In developing a SMP, the primary objective is to achieve the best practicable option for the long term management of stormwater from the development area. In addition to the requirements to consider the Stormwater Code of Practice and WSD principles, consideration should also be given to site specific constraints and circumstances as outlined in Policy E1.3.10.

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	practicable option has been adopted	located in the road corridor also require approval of Auckland Transport) - Areas of on-site and communal (public) stormwater management - Significant site features and hydrology - How the connection/vesting requirements below are met or the alternative that is proposed ▪ An assessment, which includes such detail as corresponds with the scale and significance of the effects of the proposal, of how an Integrated Stormwater Management Approach has been adopted in the design and associated stormwater management in accordance with the policies in the AUP[5] Sections E1.3, B7 and B8 to: - Minimise the stormwater related effects of development; - Retain/restore natural hydrology as far as practicable - Minimise the generation and discharge of contaminants (including gross Stormwater pollutants[6]) and stormwater flows at source - Minimise temperature related effects - Enhance freshwater systems including streams and riparian margins - Minimise the location of engineered structures in streams - Protect the values of Significant Ecological Areas as identified in the Auckland Unitary Plan ▪ Any stormwater plan prepared as part of a relevant structure plan
Water Quality (note: these apply in addition to any land use/consent requirements)		
Degraded or sensitive aquatic environment: ▪ Stream ▪ Coastal Degraded 1 or 2 ▪ Quality sensitive groundwater aquifer	▪ No more than 25 m^2 of any combination of exposed (i.e. unpainted) roofing, guttering or cladding, made of galvanised steel[7] or copper, unless treated by a water quality device designed in accordance with GD01/TP 10, for the treatment and attenuation of	▪ Treatment of all impervious areas by a water quality device designed in accordance with GD01/TP 10 for the relevant contaminants Or ▪ An alternative level of mitigation determined through a SMP that: - applies an Integrated Stormwater Management Approach (as per above); - meets the NDC Objectives and Outcomes in Schedule 2; and

[5] Auckland Unitary Plan
[6] Pollutants such as litter, plastics and other coarse material that may become entrained in stormwater flows
[7] Steel with a surface coating of 99% zinc or greater

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(see AUP)	metals in the runoff ▪ Gross pollutant traps[8] for commercial and industrial waste storage, handling or loading/unloading areas treatment and communal waste storage areas for apartments and multi-unit developments	- is the BPO. And ▪ Gross pollutant traps for runoff from: - Commercial/industrial waste storage/handling or loading/unloading areas treatment - Communal waste storage areas in apartments and multi-unit developments	
Other receiving environments	▪ Gross pollutant traps[9] for commercial and industrial waste storage, handling or loading/unloading areas treatment and communal waste storage areas for apartments and multi-unit developments		
Stream Hydrology			
Within a SMAF	▪ No additional requirements to those of the AUP		
Where discharge is to a stream via public stormwater network outside of SMAF	▪ No additional requirement to Maximum Impervious Area controls in the AUP	▪ Provide retention (volume reduction) of a minimum of 5mm runoff depth for all impervious areas; and ▪ Provide detention (temporary storage) with a draindown period of 24 hours for the difference between the pre-development (grassed state) and post-development runoff volumes from the 95th percentile, 24 hour rainfall event minus the retention volume for all impervious areas; except that Where: (a) a suitably qualified person has confirmed that soil infiltration rates are less than 2mm/hr or there is no area on the site of sufficient size to accommodate all required infiltration	▪ Achieve equivalent hydrology (infiltration, runoff volume, peak flow) to pre-development (grassed state) levels; Or ▪ An alternative level of mitigation determined through a SMP that: - applies an Integrated Stormwater Management Approach (as per above); - meets the NDC Objectives and Outcomes in Schedule 2; - is the BPO for the given project A method of achieving equivalent hydrology to pre-development (grassed state) levels is to:

[8] Auckland Council Publications GD01 and TR2011/006 provide guidance as to suitable devices for removing gross pollutants
[9] Auckland Council Publications GD01 and TR2011/006 provide guidance as to suitable devices for removing gross pollutants

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		that is free of geotechnical limitations (including slope, setback from infrastructure, building structures or boundaries and water table depth); and (b) rainwater reuse is not available because: - the quality of the stormwater runoff is not suitable for on-site reuse (i.e. for non-potable water supply, garden/crop irrigation or toilet flushing); or - there are no activities occurring on the site that can re-use the full 5mm retention volume of water the retention can be taken up by detention as follows: ▪ provide detention (temporary storage) and a drain down period of 24 hours for the difference between the pre-development and post-development runoff volumes from the 95th percentile (SMAF 1) / 90th percentile (SMAF 2), 24 hour rainfall event minus any retention volume that is achieved, over the impervious area for which hydrology mitigation is required. Or ▪ An alternative level of mitigation determined through a SMP that: - applies an Integrated Stormwater Management Approach (as per above); - meets the NDC Objectives and Outcomes in Schedule 2; - is the BPO for the given project	▪ Provide retention (volume reduction) of a minimum of 5mm runoff depth for all impervious areas; and ▪ Provide detention (temporary storage) with a draindown period of 24 hours for the difference between the pre-development (grassed state) and post-development runoff volumes from the 95th percentile, 24 hour rainfall event minus the retention volume for all impervious areas

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Flooding			
Property/pipe capacity: 10% AEP event	▪ Ensure that there is sufficient capacity within the pipe network to the first manhole downstream of the connection point to cater for the additional stormwater runoff associated with the development in a 10% AEP event. Methods of achieving this include: ▪ Demonstrating sufficient capacity is available including flows from the catchment (at maximum probable development) draining to the relevant section of pipe network in the 10% AEP event; ▪ Attenuating and reducing stormwater flows and volume on-site such that there is no increase in peak flow in a 10% AEP event from the site compared to that prior to the new development. Note that any vested devices, or devices to be managed by a body corporate associated with this option will also require an operation and maintenance plan to ensure the long-term efficacy of such a system. *Advice note: The following option also applies as an alternative to the above:* *Providing a financial contribution in agreement with Healthy Waters to upgrade the relevant pipe network where these is significant potential for additional development in the contributing catchment.*	▪ Ensure that there is sufficient capacity within the pipe network downstream of the connection point to cater for the additional stormwater runoff associated with the development in a 10% AEP event; or ▪ Demonstrate that flows in excess of the pipe capacity in a 10% AEP event within the pipe network downstream of the connection point will not increase flooding of any other property; or ▪ Demonstrate through an assessment that flows in excess of the pipe capacity in a 10% AEP event within the pipe network downstream of the connection point will not increase adverse effects on any other property. Factors to consider when evaluating adverse effects as a result of flooding should include, but are not limited to: ▪ The type, frequency and scale of increased flooding or overland flow; ▪ The type of activities being undertaken within the property and the consequences of increased flooding or overland flow in relation to these activities and the people involved; and, ▪ The potential impact on public safety, including safe access and ingress.	▪ Ensure that there is sufficient capacity within the pipe network downstream of the connection point to cater for the stormwater runoff associated with the development in a 10% AEP event including incorporating flows from contributing catchments at maximum probable development. Methods of ensuring sufficient capacity in the downstream pipe network include any one of the following: ▪ Demonstrating sufficient capacity is available including flows from the catchment (at maximum probable development) draining to the relevant pipe network in the 10% AEP event); ▪ Attenuating and reducing stormwater flows and volume on-site such that there is no increase in peak flow in a 10% AEP event from the site compared to that prior to the new development. Note that any devices associated with this option will also require an operation and maintenance plan to ensure the long-term efficacy of such a system; ▪ Upgrading the relevant pipe network to a size that can cater for the additional flows from the development in the 10% AEP event (taking into account existing flows from the contributing catchment); or

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		Methods of ensuring sufficient capacity in the pipe network in Brownfield areas include any one of the following: ▪ Demonstrating sufficient capacity is available including flows from the catchment (at maximum probable development) draining to the relevant pipe network in the 10% AEP event); ▪ Attenuating and reducing stormwater flows and volume on-site such that there is no increase in peak flow in a 10% AEP event from the site compared to that prior to the new development. Note that any devices associated with this option will also require an operation and maintenance plan to ensure the long-term efficacy of such a system. ▪ Upgrading the relevant pipe network to a size that can cater for the additional flows from the development in the 10% AEP event (taking into account flows from the contributing catchment); or ▪ Upgrading the relevant pipe network to a size that is larger than would otherwise be required to cater for the 10% AEP event for the development, due to the need to cater for flows from the contributing catchment at maximum probable development, subject to a fair and proportionate funding agreement with Healthy Waters.	▪ Upgrading the relevant pipe network to a size that is larger than would otherwise be required to cater for the 10% AEP event for the development, due to the need to cater for flows from the contributing catchment at maximum probable development, subject to a fair and proportionate funding agreement with Healthy Waters.
Buildings – 1% AEP event	No additional requirement to Maximum Impervious Area controls in AUP	▪ Manage/mitigate 1% AEP peak flow to that immediately preceding development/redevelopment Or	▪ Develop to Stormwater Code of Practice ▪ Develop in accordance with SMP as above

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		▪ An alternative level of mitigation determined through a SMP that: - applies an Integrated Stormwater Management Approach (as per above); - meets the NDC Objectives and Outcomes in Schedule 2; - is the BPO for the given project	
Assets			
General	*All new assets that are intended to become part of the Public Stormwater Network are to be designed and constructed to be durable and perform to the required level of service for the life of the asset, subject to reasonable asset maintenance.* *Note: The vesting of new stormwater assets in Council is subject to any required approvals including under the Stormwater Bylaw, and the Stormwater Code of Practice.* Stormwater management assets in the road corridor require approval from Auckland Transport prior to vesting		

Connection Requirements[10] – AT/NZTA/Railways Transport Projects[11]				
Issue/Receiving Environment	**Small projects – up to 1,000 m² of new impervious area**	**Off-road pedestrian and cycling facilities and ferry terminal facilities. New impervious area greater than 1,000m²**	**Development of new / redevelopment of impervious area for:** - **existing high use roads[12] - that includes new impervious area greater than 1,000m²** - **other roads that includes new impervious area greater than 5,000m²** - **rail corridor projects with new impervious area greater than 1,000m²**	**Development/redevelopment of a high contaminant generating carpark[13] (new/redeveloped area greater than 1,000m²)**
Catchments/areas				
Within area covered by an adopted SMP(Schedule 10)	▪ Stormwater management or connection requirements in accordance with the SMP Note that where specifically addressed in a SMP these requirements supersede any performance requirements below			
In other areas	▪ General performance requirements - No new/additional habitable floor affected by flooding in 1% AEP event and no increase in frequency of existing flooding - No significant increase in risk to the operation and structural integrity of other infrastructure in 1% AEP event - No increase in inundation that affects a building on a property in 10% AEP - No loss in overland flow path capacity, unless provided by other means Where these requirements cannot be met, a SMP that includes supporting information to justify an alternative as the BPO for the given project is required.			
Water Quality (note: these apply in addition to general performance requirements above) Where the existing road corridor is constrained off-setting within the same catchment may form part of the mitigation approach.				
All receiving environments	No requirements		▪ Treatment of new road area and any existing road area directed to same point by a water quality device designed in accordance with GD01/TP 10 for the relevant contaminants Or	▪ Treatment of new/redeveloped area (or all carpark area where it is >50% of the site) by a water quality device designed in accordance with GD01/TP 10 for the relevant contaminants Or

[10] These requirements only apply where there is a connection into the public stormwater network

[11] Note that roads constructed by a developer as part of Greenfield/Brownfield development are considered as part of that development

[12] See AUP definition: A road, motorway or state highway that carries more than 5000 vehicles per day, excluding cycle lanes, footpaths and ancillary areas that do not receive stormwater runoff from the road carriageway

[13] See AUP definition: Carpark that is exposed to rainfall and is designed for a total of more than 30 vehicles

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		▪ Treatment of equivalent area of high use road within same catchment by a water quality device designed in accordance with GD01/TP 10 for the relevant contaminants Or ▪ An alternative level of mitigation determined through a SMP that: - applies an Integrated Stormwater Management Approach (as per above); - meets the NDC Objectives and Outcomes in Schedule 2; - is the BPO for the given project	▪ Treatment of equivalent area within same catchment by a water quality device designed in accordance with GD01/TP 10 for the relevant contaminants Or ▪ An alternative level of mitigation determined through a SMP that: - applies an Integrated Stormwater Management Approach (as per above); - meets the NDC Objectives and Outcomes in Schedule 2; - is the BPO for the given project
Stream Hydrology Where the existing road corridor is constrained off-setting within the same catchment may form a part of the mitigation approach.			
With a SMAF	No additional requirements to those of AUP and general requirements above		
Where discharge is to a stream via public stormwater network outside of SMAF	No additional requirements to those of AUP and general requirements above		
Flooding			
Property/pipe capacity: 10% AEP event	**Projects – up to 5,000 m² new impervious area**[14] ▪ Ensure that there is sufficient capacity within the pipe network to the first manhole downstream of the connection point (at maximum probable development of the contributing catchment) to cater for the additional stormwater runoff associated with the new impervious area in a 10% AEP event; or ▪ Attenuate stormwater flows and volume such that there is no increase in peak flow in a 10% AEP event from the total road impervious area draining to the pipe network to the first manhole downstream of the connection point to that prior to the new impervious area. **Projects – 5,000 m² or more of new impervious area**[15] ▪ Ensure that there is sufficient capacity within the pipe network downstream of the connection point (at maximum probable development of the contributing catchment) to cater for the additional stormwater runoff associated with the new impervious area in a 10% AEP event; or ▪ Attenuate stormwater flows and volume such that there is no increase in peak flow in a 10% AEP event from the total road impervious area		

[14] It is anticipated that capacity and other issues will be assessed in conjunction with Healthy Waters
[15] It is anticipated that capacity and other issues will be assessed in conjunction with Healthy Waters

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	draining to the pipe network downstream of the connection point to that prior to the new impervious area; or ▪ Demonstrate that flows in excess of the pipe capacity in a 10% AEP event downstream of the connection point will not increase flooding of any other property and will not create a nuisance or hazard.
Buildings – 1% AEP event	Addressed in general performance requirements above.
Assets	
General	All new stormwater assets to be operated by Healthy Waters are to be built in accordance with the Stormwater Code of Practice

Schedule 5: Approval/Compliance/Certification Processes

Activity	Assessment mechanisms	Approvals	
		Stormwater Network Utility Operator [16]	Regulatory Manager Certification[17]
New or changes to stormwater diversion and discharges resulting from the development, renewal, maintenance or improvement of the public stormwater network infrastructure owned and operated by Auckland Council			
Renewal, upgrade and/or new stormwater infrastructure works that change the flow, volume, or location of discharge and which meet Schedule 4 Performance Requirements	Assessment of Changes to Catchment Discharge (ACCD)	N/A	ACCD available for audit as part of compliance review.
Renewal, upgrade and/or new stormwater infrastructure works that change the flow, volume, or location of discharge that do not meet Schedule 4 Performance Requirements but effects can be fully mitigated through other measures	ACCD/SMP	Confirmation that ACCD/SMP is consistent with Schedule 2, 3 and 4	Certification that ACCD/SMP is consistent with Schedule 2 and 3 and the project is the Best Practicable Option for the given project
Renewal, upgrade and/or new stormwater infrastructure works that change the flow, volume, or location of discharge that do not meet Schedule 4 Performance Requirements and effects cannot be fully mitigated	ACCD/SMP	Assessment that ACCD/SMP is consistent with Schedule 2 and 3 and project is the Best Practicable Option for the given project The operator shall consult with any party that is potentially adversely affected. The outcome of any such consultation shall form part of the information put forward for certification of the SMP	Certification that ACCD/SMP is consistent with Schedule 2 and 3 and the project is the Best Practicable Option for the given project

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[16] Includes Council teams delegated by the stormwater network utility operator to assess compliance.
[17] Manager, Auckland Council Regulatory Services or as delegated

Activity	Assessment mechanisms	Approvals	
		Stormwater Network Utility Operator [16]	Regulatory Manager Certification[17]
Changes to or new discharges and diversions resulting from land development where stormwater assets connect to, and/or are subsequently vested and become part of, the public stormwater network infrastructure owned and operated by Auckland Council			
New connections/vested infrastructure that meet Schedule 4 Vesting/Connection Requirements	Compliance with Schedule 4 Vesting/Connection Requirements Consultation with Auckland Transport where stormwater management devices are proposed within the existing road reserve or road reserve to be vested.	New/altered connections - SW Bylaw approval Vested assets and associated connections – SW CoP and Bylaw approval[18]	Approvals available for audit as part of compliance review

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[18] Where possible, the Consent Holder will integrate approvals under the SMP and the Stormwater Code of Practice/Bylaw. It is recognised that these approvals are often at different levels of detail, such that this is not always possible. Note that any stormwater management devices located in the road corridor also require the approval of Auckland Transport.

Activity	Assessment mechanisms	Approvals	
		Stormwater Network Utility Operator [16]	Regulatory Manager Certification[17]
Greenfield development, major redevelopment, or where Schedule 4 Vesting/Connection Requirements cannot be met	SMP Consultation with Auckland Transport where stormwater management devices are proposed within existing road reserve or road reserve to be vested. In preparing the SMP, consultation shall be undertaken with any party that is potentially adversely affected by the SMP. The outcome of any such consultation, including the views of any affected party, shall form part of the information put forward for certification of the SMP.	Adoption of SMP that is consistent with Schedule 2, 3 and 4 and is the Best Practicable Option[15] *Note: If there is already an approved existing SMP prepared after 1 January 2013, this requirement does not apply in accordance with Condition 19.*	SMP available for audit as part of compliance review

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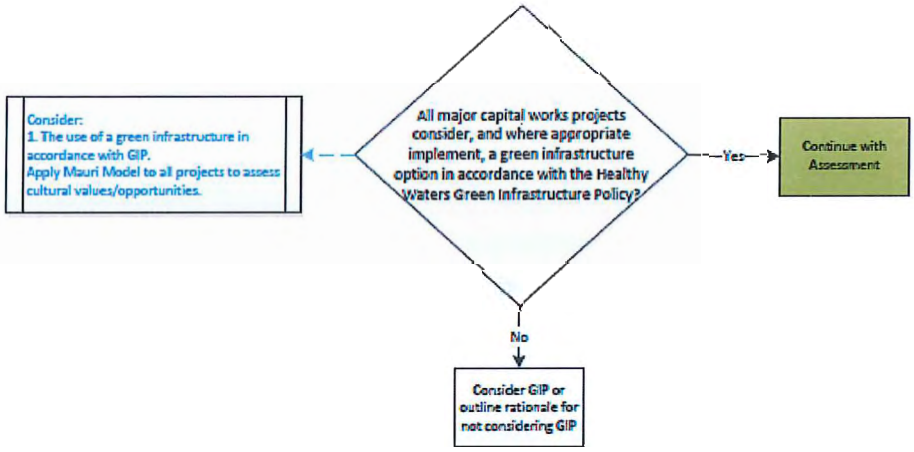
Assessment of Changes to Catchment Discharges
Green Infrastructure



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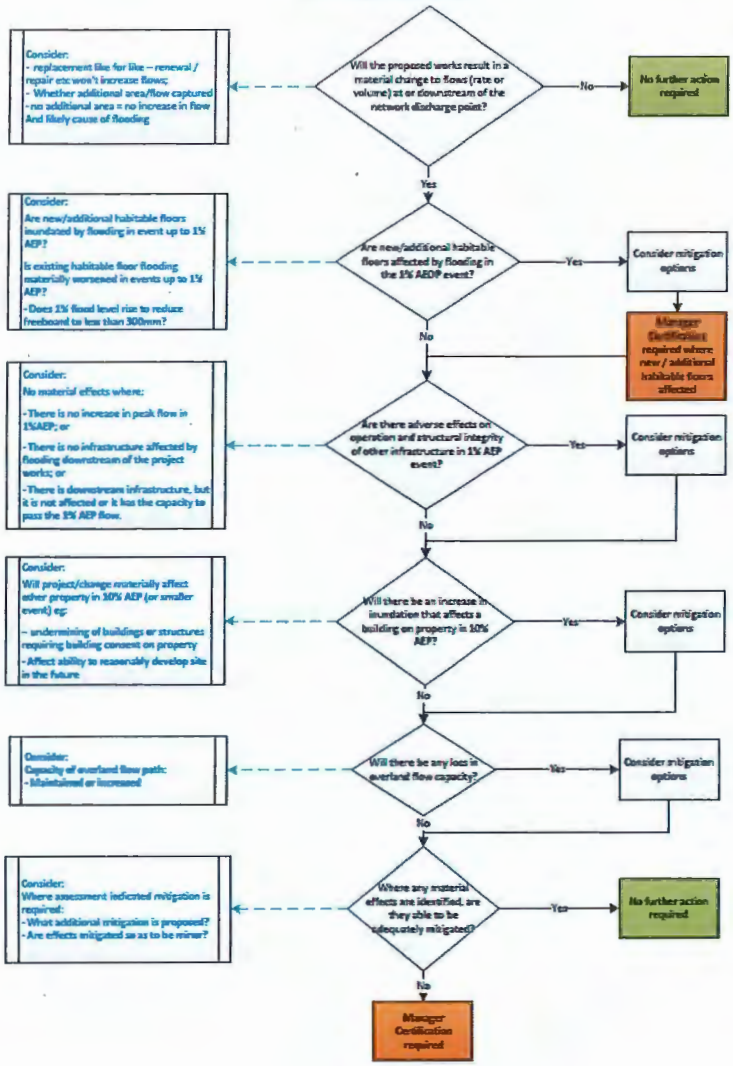
Assessment of Changes to Catchment Discharges
Flooding Assessment



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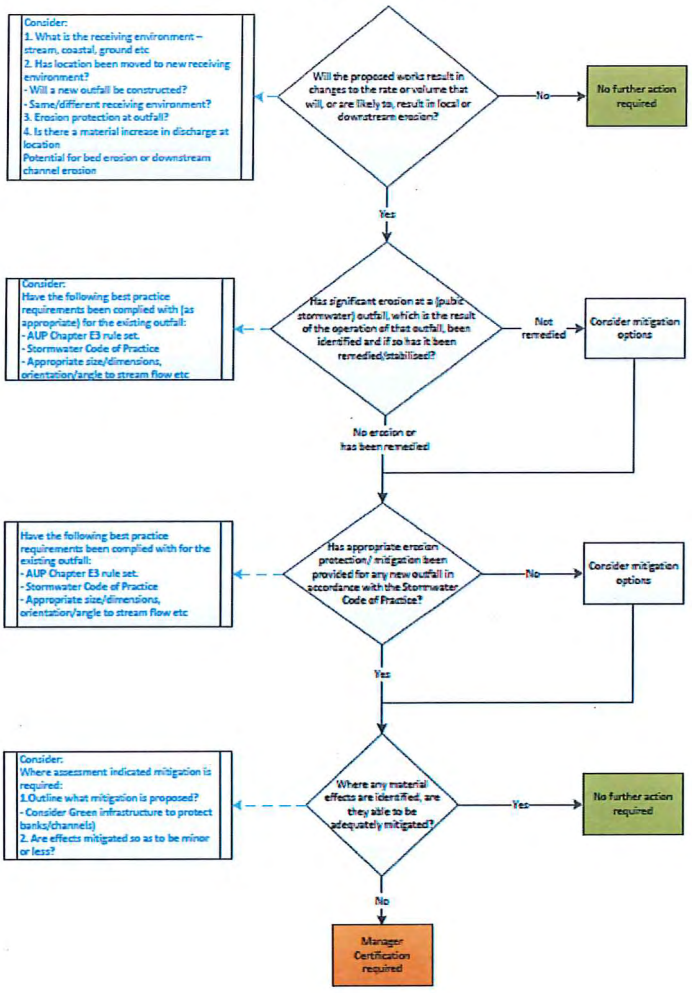
Assessment of Changes to Catchment Discharges
Erosion Assessment



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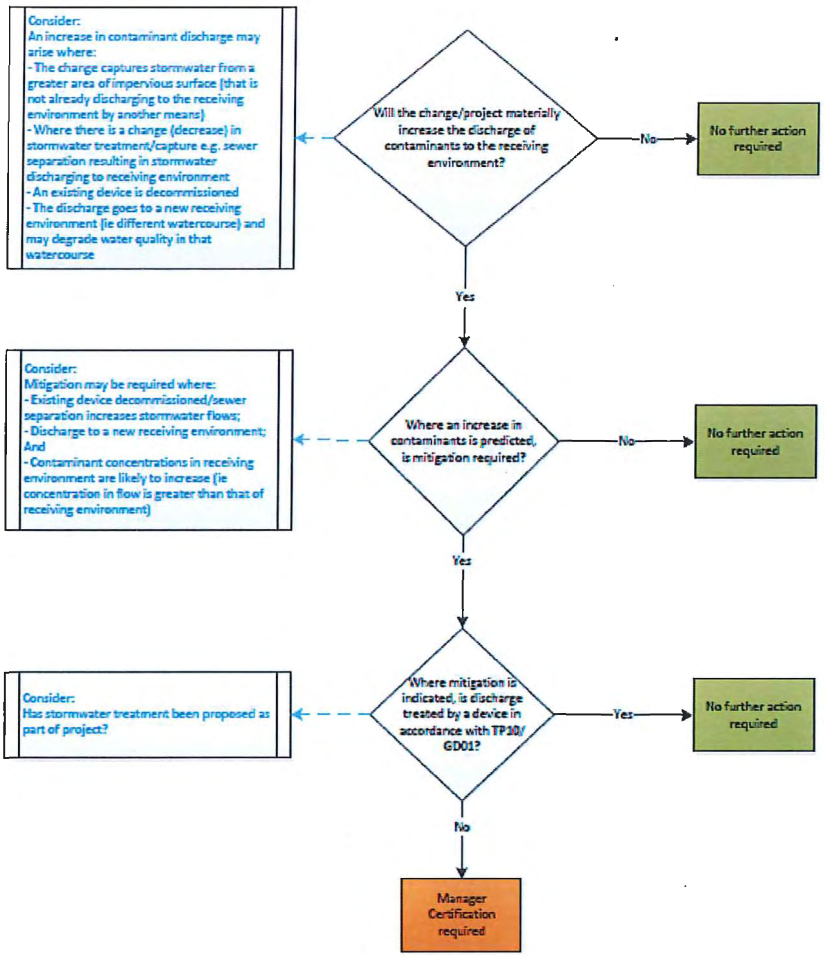
Assessment of Changes to Catchment Discharges
Water Quality



Schedule 6: Monitoring Framework

This schedule outlines monitoring that is undertaken by Council that will be used to inform performance and progress against NDC Outcomes and Milestones. The majority of the monitoring programmes are reported regularly through State of the Environment, LTP or other reporting. Monitoring relevant to the Auckland-wide Stormwater NDC will be collated and reported in accordance with the requirements and frequencies specified in the conditions of consent.

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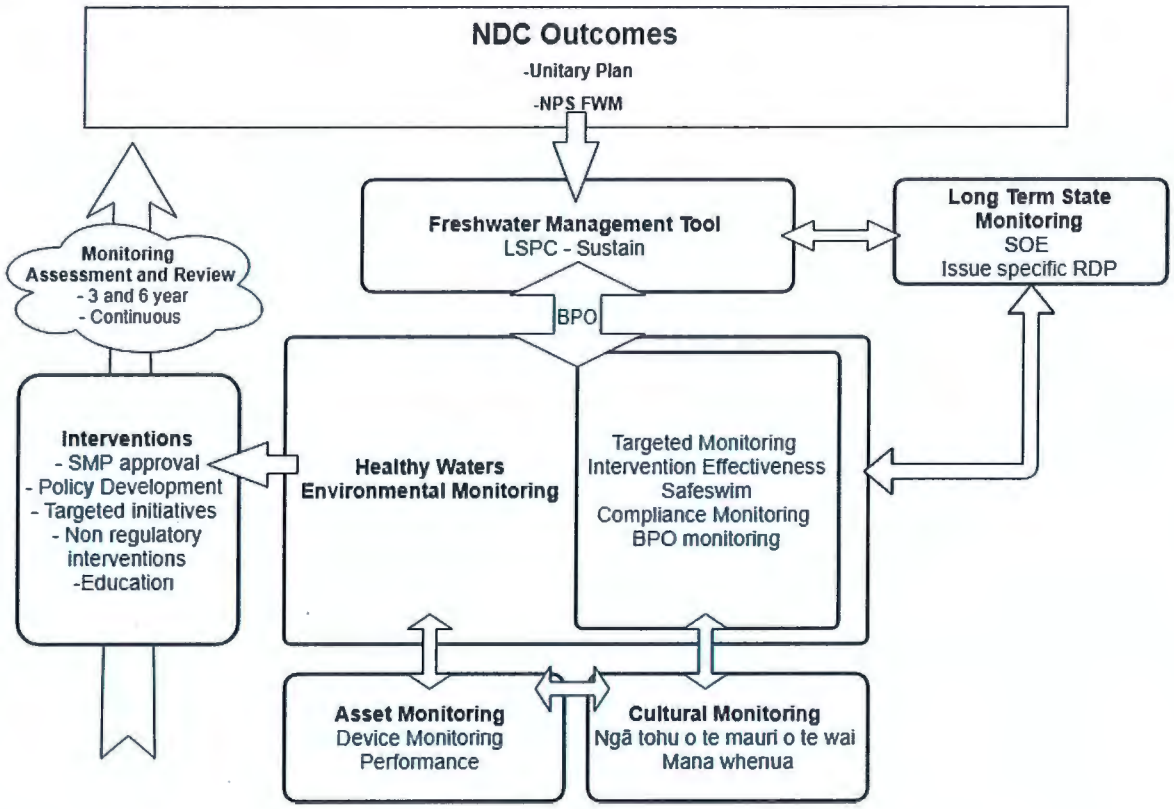
Monitoring process



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Schedule 7: Public Stormwater Network Management Obligations Retained from Existing Consents

7.1 Dawson Road / Kia Kaha Drive / Goodall Road Wetland

The Consent Holder will manage the diversion and discharge of stormwater within catchment E of the Mahurangi East Catchment in accordance with "Map 2-10B: Mahurangi East Stormwater" of the Mahurangi East ICMP Update (January 2014) and the conditions of this consent. The wetland to be created pursuant to BUN60323877 complies with Map 2-10B, the relevant ICMP and is included within the scope of this consent.

The Consent Holder cannot amend or remove this Management Obligation from this Schedule other than through a change to the conditions of this consent in accordance with s127 or s128 of the RMA.

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[will be populated as consents are surrendered]

Schedule 8: Process for Adopting a Stormwater Management Plan (to authorise new diversion/discharges as part of the NDC)

1. A person (Requestor) wishing to have an Stormwater Management Plan adopted must provide a Proposed Stormwater Management Plan to the Consent Holder containing the information set out Schedule 4, and the written consent of any third party referred to in Condition 13c;

2. If the Proposed Stormwater Management Plan meets the requirements of Schedule 2 and 4 the Consent Holder must:

   (a) adopt it in accordance with Schedule 5;

   (b) provide notice of the adopted Stormwater Management Plan to the Manager;

   (c) record the adopted Stormwater Management Plan on a publicly accessible register; and

   (d) update a GIS layer of adopted Stormwater Management Plans that includes the extent and terms of the Stormwater Management Plan.

3. If, in the opinion of the Consent Holder the Proposed Stormwater Management Plan does not meet the requirements of Schedule 2 and 4 the Consent Holder must:

   (a) Provide to the Requestor:

      (i) a summary of what aspects of the Proposed Stormwater Management Plan are not, in the consent's holder's opinion, in accordance of Schedule 2 and 4;

      (ii) the changes to the Proposed Stormwater Management Plan that would, in the Consent Holder's opinion, be required to ensure that it would be in accordance with Schedule 2 and 4;

      (iii) notice that the Proposed Stormwater Management Plan will be provided to the Manager under clause 3(b) below; and

      (iv) a timeframe (no less than 10 working days) for the Requestor to provide a written response to clauses (a)(i) and (ii) above.

   (b) Provide to the Manager (copied to the Requestor) within 5 working days of the time stated in (a)(iv) above:

      (i) the Proposed Stormwater Management Plan;

      (ii) the information provided to the Requestor under clause (a)(i) and (ii) above;

      (iii) any response provided by the Requestor in accordance with clause (a)(iv) above; and

      (iv) a request for the Manager to certify whether the Proposed Stormwater Management Plan is in accordance with the objectives and outcomes of Schedule 2 and is the BPO for the proposal.

4. Upon receiving the information listed in 3(b) above, the Manager will:

   (i) provide the material required under Item 3(b)(i) to 3(b)(iii) to the TRG and request comment from the TRG on whether the Proposed Stormwater

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Management Plan, and in particular any matters in dispute, is in accordance with the objectives and outcomes of Schedule 2 and is the BPO for the proposal. The Manager shall nominate a timeframe for the TRG to provide its response.

(ii) In writing with reasons, certify or decline to certify the Stormwater Management Plan when considered against the requirements of Item 3(b)(iv) above.

To certify the Stormwater Management Plan the Manager must be satisfied that the final extent and terms of the Stormwater Management Plan is in accordance with the objectives and outcomes of Schedule 2 and is the BPO for that proposal.

5. The decision of the Manager is binding on the Consent Holder; and the extent and terms of the Stormwater Management Plan determined by the Manager is deemed to be an adopted Stormwater Management Plan for the purposes of clause 2, unless in the opinion of the Consent Holder the proposed Stormwater Management Plan places obligations on the Consent Holder which it cannot reasonably fulfil.

6. Costs relating to the Manager's functions must be paid by the Consent Holder. Costs incurred by the Consent Holder and Requestor relating to clauses 2-4 lie where they fall.

7. If at any time through this process agreement is reached between the Consent Holder and the requestor, then clause 2 applies and no additional action is required.

Advice Notes:

It is expected that there will be a significant level of engagement throughout the Stormwater Management Plan Acceptance process, including the process under Item 3 of this schedule.

Nothing in this schedule prevents a requestor at any stage seeking a resource consent for the diversion and discharge of stormwater. If the Manager deems the proposal is not in accordance with Schedule 2 or is not the BPO, the requestor can apply for a resource consent.

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Schedule 9: Definition of Terms Used in the NDC Conditions

Assessment of Changes to Catchment Discharges (ACCD)

An internal process adopted by Healthy Waters to ensure compliance with the NDC conditions, including the performance requirements for Council renewal, maintenance and upgrade works in Schedule 4. The ACCD assesses *Capital Works Projects* to confirm that any change in stormwater diversion and discharge is within the scope of that authorised by the NDC.

Brownfield

Any already urbanized land to be redeveloped, often for more intensive or different land use.

Capital Works Projects

A stormwater infrastructure project that is undertaken by Healthy Waters.

Certified Hearings Chairperson

A *Certified Hearing Commissioner* who is also certified as a Panel Chairperson under the Making Good Decisions Programme. For the purposes of the NDC, it is anticipated that a *Certified Hearings Chairperson* would have relevant planning and stormwater management experience and adjudicate on any dispute in an independent and impartial manner, consistent with the expectations for a *Certified Hearings Commissioner.*

Certified Hearings Commissioner

A person who is certified as a hearing commissioner under the Making Good Decisions Programme or such other accreditation as approved by the Minister for the Environment pursuant to section 39A of the RMA.

Existing Stormwater Consents

Operative stormwater diversion and discharge consents that are held by Healthy Waters and which will (subject to assessment) be superseded by the NDC and subsequently surrendered.

Existing Stormwater Consents do not include resource consents held by Healthy Waters for activities other than stormwater diversion and discharge, for example resource consents for outfall structures etc.

Greenfield

Land identified for future urban development that has not been previously developed.

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NPSFM

The National Policy Statement for Freshwater Management, 2014 (updated 2017) and any subsequent revisions.

Public Stormwater Network

The stormwater network owned by Auckland Council and operated by Healthy Waters on behalf of Auckland Council including that which is currently existing and the future network as constructed by, or on behalf of, Healthy Waters or which is constructed by other parties and vested in Auckland Council.

The *Public Stormwater Network* does not include stormwater networks owned and operated by other public agencies for managing stormwater associated with their activities, nor stormwater network that is owned by a private entity.

The Manager

The Manager, Auckland Council Regulatory Services or the equivalent position, or his /her appointed nominee.

Urban Area

Land zoned residential or business, together with adjoining special purpose and open space zones.

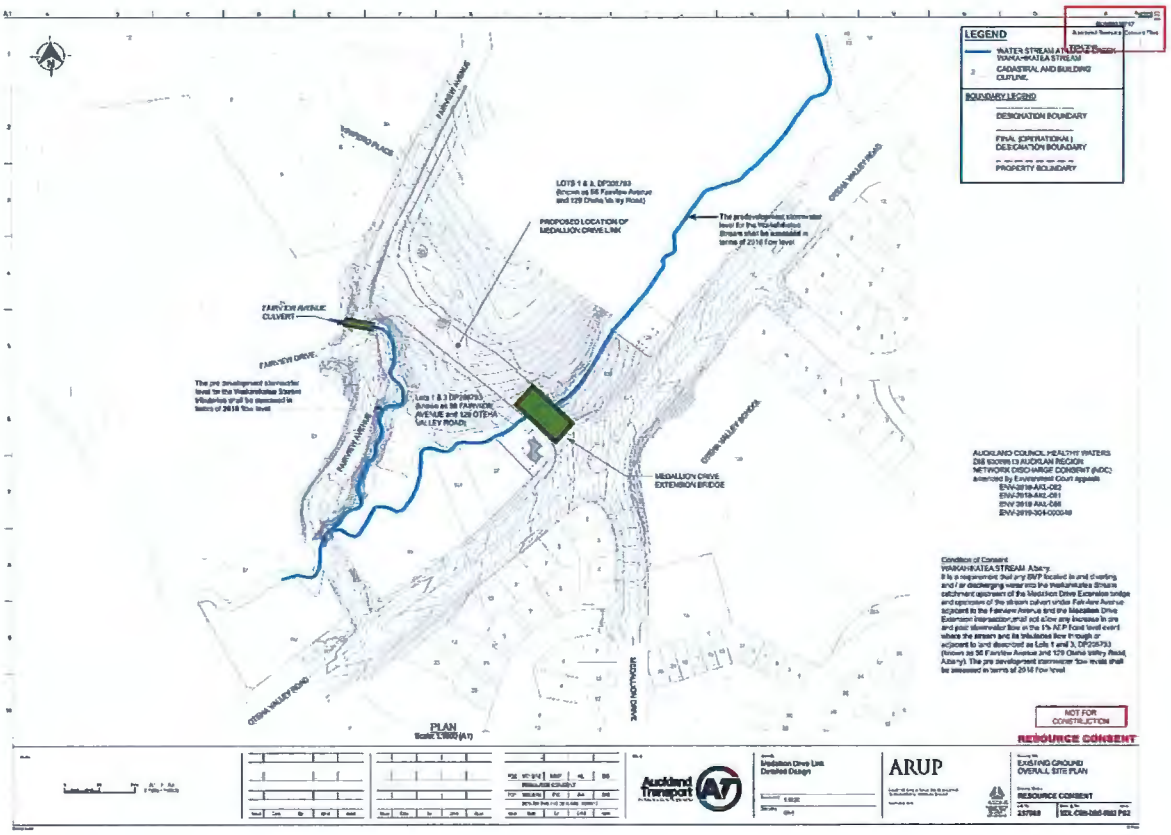
Schedule 10: Adopted or transferred stormwater management plans

10.1 Waikahikatea Stream, Albany - Stormwater Management Plan in relation to 1% AEP flooding only (all other aspects of Schedule 4 apply).

It is a requirement that any Stormwater Management Plan located in and diverting and / or discharging water into the Waikahikatea stream catchment upstream of the Medallion Drive Extension bridge and upstream of the stream culvert under Fairview Avenue adjacent to the Fairview Avenue and the Medallion Drive Extension intersection, shall not allow any increase in pre and post stormwater flow in the 1% AEP flood level event where the stream and its tributaries flow through or adjacent to land described as Lots 1 and 3 DP 208793 (known as 56 Fairview Avenue and 129 Oteha Valley Road, Albany). The pre development stormwater flow levels shall be assessed in terms of 2016 flow level.

The Consent Holder cannot amend or remove this Stormwater Management Plan from this Schedule other than through a change to the conditions of this consent in accordance with s127 or s128 of the RMA.

Map 10.1.1: Map of Lots 1 and 3 DP 208793 showing the location of the Medallion Drive Extension bridge, and the culvert under Fairview Avenue.



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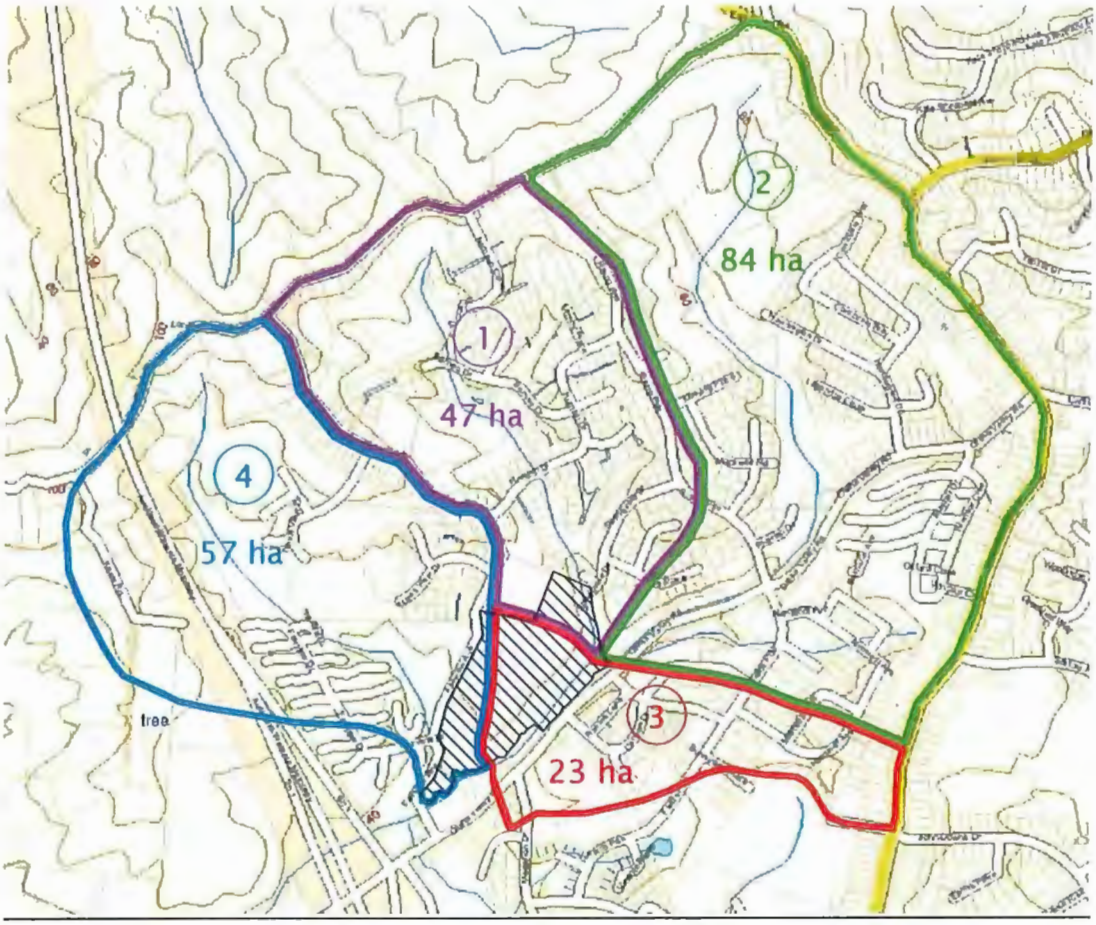
Map 10.1.2: Map showing the catchments upstream of the Medallion Drive Extension bridge to which 10.1 applies.



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SCHEDULE TWO: AMENDMENTS TO CONSENT CONDITIONS

(Tracked change version)

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Auckland Council – Public Stormwater Network Discharge Consent: Amended Conditions: 19 September 2019

Auckland Council – Stormwater Network Diversion and Discharge Consent Conditions

Scope and operation of consent

1. This consent (the Auckland Stormwater NDC) authorises diversions and discharges of stormwater from the Public Stormwater Network within existing and future urban areas (including special purpose zoned land and marina land) as set out in Schedule 1 of this consent, in accordance with Auckland Council application number DIS60069613, and authorises the following activities:

   a. Existing stormwater diversions to (including from existing road and other existing land uses) and discharges from the Public Stormwater Network at the time of commencement of this consent;

   b. New or changes to stormwater diversions and discharges from the renewal, maintenance, development or improvement of the Public Stormwater Network, subject to compliance with either:

      i. the performance requirements in Schedule 4; or

      ii. ~~a~~an adopted Stormwater Management Plan ~~adopted~~listed in ~~accordance with~~ Schedule ~~8~~10.

   c. New, or changes to existing, diversions and discharges resulting from:

      i. the increase of, or changes to, impervious areas from redevelopment, intensification, and/or land use change within existing urban areas that discharge to the Public Stormwater Network; or

      ii. the increase of/changes to impervious areas from the development of ~~greenfield areas~~Greenfield land where stormwater assets connect directly to, and/or are subsequently vested and become part of, the Public Stormwater Network;

   subject to compliance with the performance/connection requirements in Schedule 4 or ~~a~~an adopted Stormwater Management Plan ~~adopted~~listed in ~~accordance with~~ Schedule ~~8~~10.

Advice Note 1

*For the avoidance of doubt the following activities are **not** authorised under this consent:*

a. Discharge of contaminants from the activity area of an industrial and trade activity site;

b. Sediment discharges from earthworking;

c. Stormwater diversions and discharges from the existing or new road network:

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i. *that discharge directly to a stormwater network that is not owned and operated by Auckland Council; and/ or*

ii. *that discharge directly to a freshwater or coastal natural environment or to ground;*

d. *Stormwater diversions and discharges in rural zoned areas, other than stormwater discharges from urban areas that may enter rural areas;*

e. *Wastewater discharges and discharges from the combined sewer network;*

f. *Private network discharges and any associated stormwater infrastructure that directly connect to a stormwater network that is not owned and operated by the Auckland Council, and / or are not subsequently vested to the Auckland Council;*

g. *Any diversion of overland flowpaths and floodplains as a result of structures or land modification not authorised by the holder of this consent;*

h. *Physical works that give effect to the discharge consent.*

i. *All other discharges (not being stormwater) that are either permitted under the ~~AUP~~Auckland Unitary Plan (e.g. including those in E.4 of the ~~AUP~~Auckland Unitary Plan) or for which resource consent has been obtained.*

Advice Note 2

This consent does not ~~purport to~~ alter the status of any activities ~~currently~~ permitted under the ~~AUP~~Auckland Unitary Plan and as such approval for permitted ~~diversions~~activities is not required under this consent. Any activity that is permitted under the ~~AUP~~Auckland Unitary Plan may still require other approvals, including under any Council bylaw relating to the public stormwater network.

Advice Note 3

Redevelopment under Condition 1(c)(i) does not include:

(a) maintenance or repairs, such as:

(i) pothole repairs to parking areas, driveways and paving; and

(ii) painting of roofing and exterior cladding;

(b) resurfacing that does not involve re-direction of existing stormwater flows or drainage networks; and

(c) trenching and resurfacing associated with the installation, maintenance, repair and replacement of underground equipment, infrastructure or underground utility works.

As such, these minor activities do not constitute a change to existing diversions and discharges for the purposes of this consent.

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Advice Note 4

Private stormwater networks authorised by a private diversion and discharge consent are not subject to the requirements of this consent, but may be permitted to connect to the public stormwater network subject to other approvals, including under any Council Bylaw relating to the public stormwater network.

2. The Public Stormwater Network shall be operated, maintained, improved and developed to meet the strategic objectives, outcomes and targets listed in Schedule 2, and in ~~general~~ accordance with:

   a. the Auckland Stormwater Network Discharge Consent Application (August 2017) and associated Appendices or any modifications that result from reviews undertaken pursuant to the conditions of the Auckland Stormwater NDC;

   b. the best practicable option methodology and prioritisation set out in Schedule 3;

   c. the requirements of Schedule 4, including in respect of increases/changes to stormwater flows from development and redevelopment where stormwater assets connect directly to, or become part of the Public Stormwater Network;

   d. the certification processes in Schedule 5;

   e. monitoring as required by Condition 37;

   f. any specific ~~conditions~~public stormwater network management obligations set out in Schedule 7; and

   g. ~~a~~an adopted Stormwater Management Plan ~~adopted in accordance with Schedule 8 and~~ listed in Schedule 10.

Commencement

3. This consent will not commence until all charges under section 36 of the RMA relating to the receiving, processing and granting of the Auckland Stormwater NDC have been paid in full to the Auckland Council.

Expiry

4. This consent expires on 26 November 2052.

Administrative charges

5. The Consent Holder shall pay the council an initial consent compliance monitoring charge of $5,000 (inclusive of GST), plus any further monitoring charge or charges to recover the actual and reasonable costs incurred to ensure compliance with the conditions attached to this consent/s.

Advice note:

The initial monitoring deposit is to cover the cost of inspecting the site, carrying out tests, reviewing conditions, updating files, etc., all being work to ensure compliance with the resource consent. In order to recover actual and reasonable costs, monitoring of conditions, in excess of those covered by the deposit, shall be charged at the relevant hourly rate applicable at the time. The Consent Holder will be advised of the further monitoring charge. Only after all conditions of the resource consent have been met, will the council issue a letter confirming compliance on request of the Consent Holder.

6. The Consent Holder shall pay the Council's reasonable costs in carrying out its functions in terms of certification and monitoring under this consent.

Site access

7. The Consent Holder shall ensure that access to relevant parts of the Public Stormwater Network is available at all reasonable times to the Manager, to the extent that such access is within the Consent Holder's control, for the purpose of carrying out inspections, surveys, investigations, tests, measurements and to take samples.

Erosion protection

8. All new stormwater discharge structures shall be designed, constructed and managed to minimise material erosion at points of discharge.

Advice Note:

The works associated with erosion control measures may require separate consents.

Operation and Maintenance Plan

9. An Operation and Maintenance Plan for the operation and maintenance of the Public Stormwater Network shall be prepared and implemented by the Consent Holder. At a minimum the Operation and Maintenance Plan must include a description of the processes in place for, and key elements of, the operation and maintenance of the stormwater network, including:

   a. Maintenance of Council's stormwater asset register.

   b. Updating the asset register following commissioning and vesting of any new major stormwater network infrastructure or management assets under this consent.

   c. The frequency for updating the publicly available components of the register onto Council's GIS;.

   d. An inspection and maintenance programme for network infrastructure to prevent or minimise erosion at discharge points, obstructions to flows and hazards.

   e. Pre and post storm monitoring processes of critical or at-risk components of the network to minimise blockages and flood risk.

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f. Incident reporting processes.

g. Maintenance requirements and schedules for infrastructure and asset types and a process for remedial actions.

h. An outline of the service standards to be achieved and how these are given effect to.

i. Compliance with any relevant conditions of the Auckland Stormwater NDC.

j. Any requirements that result from decisions on the Auckland NDC application number DIS60069613.

10. The Consent Holder shall review the Operation and Maintenance Plan at least every six years as part of the Stormwater Network Discharge Review (Condition 25). The Consent Holder may also review the Operation and Maintenance Plan at any time for operational purposes. Any changes to the Operation and Maintenance Plan must be certified in accordance with Condition 34.

11. The Consent Holder shall provide a copy of the Operation and Maintenance Plan to the Manager for certification ~~that it meets the requirements of Condition 9~~, within six months of the commencement of this consent. This copy of the Operation and Maintenance Plan shall include any amendments that have been made during the processing of the Auckland Stormwater NDC application number DIS60069613.

Changes to Catchment Discharges

12. The Consent Holder shall maintain a register of all Assessments of Changes to Catchment Discharges prepared to support the development, renewal, maintenance or improvement of the public stormwater network. This register is to be made available to the Manager for review on request.

Process for adopting a Stormwater Management Plan

~~Subject to Condition 14, a~~

13. A Stormwater Management Plan that is proposed after the commencement of this consent may be adopted by the Consent Holder into this consent ~~by one of the following mechanisms: in accordance with Schedule 8, through a notified Plan Change, or through a change to conditions under section 127 of the RMA.~~;

~~Subject~~a. Through a change to ~~Condition 15, a SMP~~conditions under section 127 of the RMA;

b. Following the approval of a notified Plan Change, provided:

i. The Stormwater Management Plan has been prepared to support the notified Plan Change and the Plan Change is consistent with that ~~is proposed after the commencement of this consent may not be adopted through~~Stormwater Management Plan; and

ii. The Stormwater Management Plan is consistent with Schedule 2 and Schedule 4; or

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c. Through the process provided in Schedule 8 ~~if~~, unless:

i. The ~~SMP~~Stormwater Management Plan imposes a more stringent standard than those set out in Schedule 4 on land owned or controlled by a party other than the requestor (third party property), and that party has not given their written approval; or

ii. The ~~SMP~~Stormwater Management Plan requires or relies on works on third party property~~, unless~~ and the third party has not given their written approval; or

iii. The ~~SMP~~Stormwater Management Plan includes a discharge from a ~~greenfields~~Greenfield development into a 'significant ecological area terrestrial' or 'significant ecological area marine' as defined in the ~~AUP via a new~~Auckland Unitary Plan. This condition applies to discharges that will occur via a new or existing stormwater network that discharges directly into the significant ecological area or into a stream that then flows directly into a significant ecological area marine. ~~-~~This ~~clause~~condition does not apply ~~if the discharge is via an existing stormwater network, including an existing network~~to Greenfield land that ~~has been upgraded or renewed.~~is zoned as an urban area in the Auckland Unitary Plan at 1 October 2019.

~~In these~~ Should any of the circumstances ~~a change to the conditions of this consent~~ in ~~accordance with Section 127 of~~c apply, the ~~RMA, or a separate resource consent authorising the diversion and discharge, will be required.~~

~~14. A SMP~~Stormwater Management Plan may only be adopted ~~directly~~ into ~~Schedule 10 where:~~

~~a. The SMP has been prepared to support a notified Plan Change and the Plan Change gives effect to the requirements of the SMP;;~~

~~b. The SMP is consistent with the requirements of Schedule 4 and the objectives and outcomes of the Auckland Stormwater NDC; and~~

~~c. The discharge of stormwater from the area covered~~ the consent by the ~~Plan Change and SMP will not:~~

~~Adversely affect the values of a Significant Ecological Area, as identified~~processes detailed in ~~the Auckland Unitary Plan; or~~a or b.

~~Result in significant adverse effects on aquatic life.~~

~~In this situation a SMP can be adopted directly into Schedule 10 without further process. A stormwater management plan prepared to support a structure plan must be had regard to when developing an SMP to adopted into this resource consent for the same area (see Schedule 4).~~

14. Left blank to keep numbering order.

15. Left blank to keep numbering order.

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~~15.~~16. The Consent Holder shall maintain Schedule 10 as a register(s) of approvals and adopted Stormwater Management Plans and update this register(s) within three months following the adoption of ~~each certification.~~a Stormwater Management Plan. This register is to be made available to the Manager on request. ~~Adopted~~The extent and terms of an adopted Stormwater Management ~~Plans~~Plan shall be ~~made available to the public~~included on a publicly accessible GIS layer as soon as practicable following adoption.

16A. An adopted Stormwater Management Plan may be amended by the Consent Holder, provided that:

a. The amendments relate to matters of detail and do not result in reduced levels of stormwater management performance or increase the likelihood of adverse environmental effects than that provided for and/or required by the adopted Stormwater Management Plan;

b. The Consent Holder has engaged with parties relying on the Stormwater Management Plan for their developments on the proposed amendments and there is no dispute in relation to the amendments;

c. The amendments have been certified by the Manager in accordance with Condition 34; and

d. The updated Stormwater Management Plan is included in the register of adopted Stormwater Management Plans in Schedule 10 and the publicly accessible GIS layer.

Where a dispute arises in relation to Clause b, the following process shall apply:

a. Written notice of the dispute must be provided by the Consent Holder to the Manager. The written notice must include: a copy of the relevant Stormwater Management Plan, the amendments sought to the Stormwater Management Plan, the reasons why the Consent Holder considers the amendments meet the requirements of clause a, any response provided by a party relying on the relevant Stormwater Management Plan for their developments, and the reasons for the disagreement under clause b;

b. The Manager will provide the written notice to the Technical Reference Group (**TRG**) (Condition 20) with a request to comment on the reasons for the disagreement. The Manager shall nominate a timeframe for the TRG to provide its response;

c. The Manager must, with reasons, certify or decline to certify the proposed amendments to the Stormwater Management Plan, taking into account the reasons for the disagreement in accordance with clause c.

Surrendering of existing stormwater discharge consents

~~16.~~17. The Consent Holder shall commence a process to surrender Existing Stormwater Consents within six months of the Auckland Stormwater NDC commencing. In surrendering Existing Stormwater Consents, the Consent Holder shall ensure that:

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a. *Existing Stormwater Consents* are assessed against the conditions of this consent before they are surrendered, in accordance with the process in Appendix I of the Auckland Stormwater NDC consent application~~;~~.

b. ~~Any~~Any public stormwater network management obligations (**Obligations**) set out in conditions on the *Existing Stormwater Consents* that are not covered by the conditions of the Auckland Stormwater NDC and that remain relevant shall be incorporated into Schedule 7, which forms part of the conditions of the Auckland Stormwater NDC. Amendments to Schedule 7 to incorporate additional ~~conditions~~Obligations or to remove ~~conditions~~Obligations from this schedule that are no longer relevant must be certified by the Manager in accordance with Condition 3~~4; and~~.

c. Any stormwater management requirement of an existing Stormwater Consent or covered by an existing legal agreement between the Council and another party addressing stormwater management of a development, that are current and relevant shall be adopted as a ~~SMP.~~Stormwater Management Plan and listed in Schedule 10. This can be done by adopting the existing catchment or stormwater management plan in its entirety or in part as appropriate.

d. Prior to surrendering an *Existing Stormwater Consent* that was granted after 31 January 2001 (unless otherwise stated below), it engages with the following parties to ascertain their views on what ~~aspects of the consent need to be retained or imported into~~Obligations and related Integrated Catchment Management Plan/ Stormwater Management Plan requirements need to incorporated into the schedules of this consent:

- Mana whenua with interests in the area to which the consent relates;
- The Department of Conservation for those areas identified in its submission dated 19 March 2018 on the Auckland Stormwater NDC;
- Parties relying on the consent for stormwater management to undertake ~~greenfield~~Greenfield or ~~brownfield~~Brownfield development.
- Parties relying on the consents for stormwater management relating to existing marinas, including consents granted prior to 31 January 2001.

~~17.~~18. The Consent Holder shall complete this process within 24 months of the commencement of this consent.

Adoption of Existing ~~ICMPs and SMPs~~Integrated Catchment Management Plans and Stormwater Management Plans

~~18.~~19. The Consent Holder shall:

a. Maintain a publicly available and online schedule of adopted ~~ICMPs and SMPs~~Integrated Catchment Management Plans and Stormwater Management Plans (Schedule 10).

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b. Include in the schedule any ~~ICMPs / SMPs~~Integrated Catchment Management Plans / Stormwater Management Plans approved after 1 January 2013.

Technical Reference Group (TRG)

~~19.~~20. Within three months of the commencement of the resource consent, the Consent Holder shall establish, and thereafter retain at its cost an independently appointed Technical Reference Group (TRG) to assist in a review and advisory role. The membership and method of appointment of the TRG shall comprise:

a. A Professional Engineer with significant knowledge and experience of the development sector and the design and operation of stormwater networks within Auckland, appointed by the Chief Executive of Engineering New Zealand (or its successor).

b. A full Member of the New Zealand Planning Institute (NZPI) with significant experience in development/stormwater planning within Auckland, appointed by the Chief Executive of the NZPI (or its successor).

c. Two representatives with experience in Te Mauri o te Wai, including one with formal qualifications in an aspect of environmental science such as freshwater quality, ecology or similar; appointed by the Chair of Auckland Council's Mana Whenua Kaitiaki Forum or alternatively the Chief ~~executive~~Executive of the Auckland Council.

Where the appointing or nominating role is declined by the organisation, that ~~duty~~role shall be undertaken by the Chief Executive of Auckland Council.

Where the TRG is required to review information and provide advice the Consent Holder shall commission the TRG to prepare a report setting out the TRG's comments and advice (as is relevant) and submit this report to the Manager. For the avoidance of doubt the Consent Holder shall instruct the TRG to document and report any material differing views where they arise.

Mana Whenua Engagement Strategy

~~20.~~21. Within twelve months of the commencement of this consent, the Consent Holder shall prepare and implement a Mana Whenua Engagement Strategy, developed in conjunction with Mana Whenua. The purpose of the Strategy is to ensure that Mana Whenua are involved in the on-going implementation of the consent conditions, including (but not limited to) the Monitoring Strategy, the Triennial Stormwater Network Review and Report and the 6 yearly Stormwater Network Discharge Review.

Stormwater Management Plan Template

~~21.~~22. Within six months of the commencement of this consent, the Consent Holder shall prepare an updated Stormwater Management Plan Template. In preparing the updated Stormwater Management Plan Template the Consent Holder must:

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a. Have regard to the existing template provided in Appendix F of the NDC application and the requirements of Schedule 4;

b. Consider the differing requirements for catchments / developments of varying scales and complexity;

c. Engage with members of the development industry (active in stormwater management) on the template requirements; ~~and~~

d. Engage with mana whenua to appropriately provide for their involvement in stormwater management planning.; and

e. Ensure that the Stormwater Management Plan Template requires an assessment of the values of, and potential effects on, Significant Ecological Areas scheduled in the Auckland Unitary Plan, and how they are to be managed, to such detail as corresponds with the scale and significance of those effects.

The Consent Holder may subsequently amend the ~~SMP~~Stormwater Management Plan Template at any time, following the same process.

Advice Note

The purpose of the template is to ensure all necessary information is included in the ~~SMP~~Stormwater Management Plan and that while parties preparing ~~SMPs~~Stormwater Management Plans will be invited to use the template, alternative formats will be accepted providing they include all necessary information.

Triennial Stormwater Network Review and Report

~~22.~~23. The Consent Holder shall ~~undertake~~prepare a 'Triennial Performance Report' addressing the following and provide this to the Manager:

a. Register of Capital Works undertaken to achieve the Auckland Stormwater NDC objectives, outcomes and six-year targets set out in Schedule 2.

b. Register of amendments to the Operation and Maintenance Plan.

c. Updated register of adopted Stormwater Management Plans.

d. The information from the Stormwater Monitoring Strategy and ~~Programme~~associated programme required by Condition 37, including analysis of data, comparison against recognised guidelines (including those in the NPSFM), associated trends of relevance to the stormwater network and the implication of these. In particular, this shall include an assessment of state and trends for representative sites affected by stormwater discharges authorised by this resource consent for the following monitoring programmes (or equivalent):

i. Stream water quality;

ii. Stream ecology;

iii. Groundwater quality;

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iv. Marine benthic contaminants; and

v. Marine ecology.

e. Engagement with mana whenua.

f. Any changes to Council's Long-Term Plan that may affect the ability to achieve the Auckland Stormwater NDC outcomes and any changes to the Auckland Stormwater NDC that may be required as a result.

g. A summary review of the above information, undertaken by the TRG.

~~23.~~24. The first 'Triennial Performance Report' shall be provided to the Manager by 1 February 2021. The second report shall be provided by 30 September ~~2023~~2022 and then every three years from that date. Where a 'Triennial Performance Report' is due to be provided at the same date as a Stormwater Network Discharge Review pursuant to Condition 25, the information listed in Condition 23 may be incorporated into the Stormwater Network Discharge Review, and no additional Triennial Performance Report is required.

6 yearly Stormwater Network Discharge Review

~~24.~~25. The Consent Holder shall provide the Manager with a 'Stormwater Network Discharge Review' that outlines a review of the implementation of the Auckland Stormwater NDC for certification. The review shall include a summary of:

a. The matters listed in Condition 23 (Triennial Stormwater Network Review and Report).

b. Performance review against the Auckland Stormwater NDC objectives, outcomes and six-year targets set out in Schedule 2 and the wider BPO set out in Schedule 3.

c. The information from the Stormwater Monitoring Strategy and Programme required by Condition 37, including analysis of data, comparison against recognised guidelines (including those in the NPSFM), associated trends of relevance to the stormwater network and the implication of these.

d. The certified Operation and Maintenance Plan (Condition 9).

e. Summary of the relevant Auckland Council's strategic documentation including the Council's current Long-Term Plan and Annual Plan.

f. Review of best practice stormwater management technologies.

g. Review of any:

- legislative changes, including (without limitation) changes to the Unitary Plan; and
- new or changed customary marine titles, Treaty of Waitangi settlements or any iwi management plans;

that have relevance to the operation of the stormwater network and associated discharges.

h. Review, and if necessary, update of climate change predictions to be adopted for design and management of the stormwater network.

i. Identification of any changes that may be required in management processes, consent conditions, network discharges, consent objectives and outcomes and/or six-year targets.

j. A summary of any updates to models, methodologies, and mapping undertaken to manage the stormwater network.

k. Engagement undertaken with mana whenua in accordance with Condition 29.

l. ~~Consultation~~Engagement undertaken with stakeholders listed in Condition 30.

m. Key areas of public feedback in accordance with Condition 31.

~~25.~~26. The first Stormwater Network Discharge Review shall be provided to the Manager by 30 September ~~2023~~2022, and then every six years from that date.

~~26.~~27. As a result of information from Condition 25, the Stormwater Network Discharge Consent Review shall identify any changes that are required to address unanticipated adverse effects and update the best practicable option for managing the Public Stormwater Network. This includes changes to:

a. Management processes

b. Objectives and outcomes

c. Revised six-year targets

d. Consent conditions including changes to connection requirements.

Advice note:

The Consent Holder may, under Condition 33, update the schedules and targets. Other changes may require an application under s127 of the RMA.

~~27.~~28. The Consent Holder shall provide a draft Stormwater Network Discharge Consent Review to the TRG, and commission it to undertake and report on an independent review of the material prepared in accordance with Conditions 23 and 25 with the aim of ensuring the outcomes of the Auckland Stormwater NDC are met and continue to represent current best practice. The TRG report shall be provided to the Manager when the Consent Holder seeks the Manager's certification of the Stormwater Network Discharge Review.

~~28.~~29. The Stormwater Network Discharge Review shall include engagement with iwi and mana whenua as provided below:

a. Inform iwi authorities with mana whenua interests within the area subject to this consent of the intention to update the Stormwater Network Discharge Review three months prior to commencing the Review, and the timetable

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and opportunities for these iwi authorities to engage in the preparation of the Review.

b. Engage with iwi authorities with mana whenua interests within the area covered by this consent, including receiving environment classifications, cultural values and all discharges to water.

c. Prepare a summary of feedback from engagement, including highlighting any area of contention.

~~29.~~30. The six yearly Stormwater Network Discharge Review shall include engagement with the parties listed below (or their successors), unless Condition 30A applies, generally in accordance with the engagement process outlined in Condition 29:

a. Local Boards.

b. Wastewater network utility operators within Auckland.

c. Other stormwater network utility operators within Auckland.

d. Auckland Regional Public Health Service.

e. Relevant stormwater and development sectors.

f. The Property Council of New Zealand.

g. Metals New Zealand

h. Department of Conservation.

i. ~~i.~~ Oil Industry Environmental Working Group.

j. Royal Forest and Bird Protection Society of New Zealand.

k. Stop Auckland Sewage Overflows Coalition.

l. The Manukau Harbour Restoration Society.

m. Other parties agreed to by the Consent Holder.

A summary of feedback from engagement shall be prepared, including highlighting any area of contention.

30A. Should a party listed in Condition 30 not wish to engage on the six yearly review, or is a group that is no longer in existence, then this should be recorded and reported in the summary of feedback. There is no further requirement to engage with this party in subsequent six-yearly reviews. A party that does not respond in writing within one month accepting a written request by the Consent Holder to engage is deemed to not wish to engage for the purposes of this condition.

30B. Engagement under Conditions 29 and 30 shall be in general accordance with the principles of consultation outlined in Section 82 of the Local Government Act 2002. This includes the preparation and circulation of a summary of key stormwater

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management initiatives, network performance and receiving environment state and trends including the information required under Condition 23 d. prior to engaging.

Community ~~Engagement~~Feedback

~~30.~~31. The six yearly Stormwater Network Discharge Review shall provide for input from members of the public and public interest groups by:

a. Making a summary of the implementation of the NDC, relevant monitoring information and implications for the on-going implementation of the NDC publicly available and accessible;

b. Give details on the Council website, and any public Council general information publication distributed by the Council and place a public notice in the daily or weekly newspapers circulating in the region of:

i. The timetable for the six yearly review

ii. The information available and where it can be sourced

iii. How members of the public or interest groups can provide feedback and the timeframe to give responses which shall not be less than 30 working days

c. Preparing a summary of feedback that is received, including highlighting any key areas of feedback and matters that may be put forward for further consideration and engagement through Council's LTP process.

d. The process in Conditions 31 a. – c. shall be completed prior to the public notification of the following LTP.

~~31.~~32. The Consent Holder shall report back to those parties outlined in Conditions 29 and 30, and any party under Condition 31~~,~~ who ~~engaged in consultation/~~ provided feedback on the outcomes of the Stormwater Network Discharge Review, in particular the changes identified in Condition 27.

Amendments to the Consent Schedules and six-year Targets

33. Amendments to the Schedules of this consent ~~and/or to the six-year targets including, but not limited to, the inclusion of new schedules or targets and amendments resulting from the review undertaken in accordance with Conditions 25 - 32, are authorised under this consent where these proposed amendments are certified by the Manager to be in accordance with the Auckland Stormwater NDC~~can be made as follows:

a. The Strategic Objectives and Outcomes ~~provided~~ in ~~Schedule~~Schedules 2~~.~~ and 3, and Schedules 4, 5, 8 and 9 – through a change to the conditions of this consent in accordance with s127 or s128 of the RMA;

~~For the avoidance of doubt, changes to~~ b. Schedules 2 and 3 other than the Strategic Objectives and Outcomes – following a six-yearly review subject to Manager's Certification in accordance with Condition 34, or alternatively

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through a change to the conditions of this consent in ~~Schedule 2 can only be made through an application to change~~ accordance with s127 or s128 of the RMA;

c. All other Schedules – at any time subject to compliance with the requirements of the conditions of this consent or alternatively through a change to the conditions of this consent through s127 or s 128 of the RMA.

Manager's Certification Process

~~32.~~34. The Consent Holder shall obtain Manager's certification for:

a. Amendments to Schedule 7 to incorporate any relevant ~~conditions~~management Obligations adopted from existing consents that are surrendered or to remove any ~~conditions~~management Obligations that have been given effect to ~~or superseded by this consent~~ (Condition 17) and to ~~confirm~~certify that the process in Condition 17 has been followed and the relevant stormwater management requirements in an existing consent or covered by an existing legal agreement between the Council and another party addressing ~~—~~stormwater management of a development, are appropriately incorporated into an adopted ~~SMP~~Stormwater Management Plan (as required).

b. The six-year Stormwater Network Discharge Review set out in Condition 25~~.~~ to certify that the reporting and engagement required by Conditions 25 to 30B have been undertaken.

c. Amendments to the schedules of this consent ~~and/or to the six-year targets, including~~where Manager's certification is required under Condition 33 to certify that the ~~inclusion of new schedules or targets, that~~ amendments are in accordance with the ~~Auckland Stormwater~~ NDC Strategic Objectives and Outcomes in Schedule 2 ~~(Condition 33).~~and 3.

d. The Operation and Maintenance Plan and associated changes as set out under Conditions 9 - 11 to certify that it meets the requirements of Condition 9.

e. The mitigation of new or changes to stormwater discharges resulting from the renewal, maintenance or improvement of the public stormwater network infrastructure owned and operated by Auckland Council ~~that do not meet the requirements of Schedule 4 but which are identified as the BPO for a~~where a Stormwater Management Plan is required to certify that the Stormwater Management Plan meets the NDC Outcomes (Schedule 2), to the extent practicable applies an Integrated Stormwater Management Approach and is the best practicable option for the given project.

~~f. Any refinement to the NDC BPO (Schedule 3), noting that in accordance with Figure 11.1, major changes to the NDC BPO will require a change to the conditions of this resource consent under either section 127 or section 128 of the RMA.~~

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~~g.~~f. The Auckland Stormwater NDC Monitoring Programme (Conditions 37 – 39 and Schedule 6) and subsequent changes to this monitoring programme to ~~ensure~~certify that the programme is consistent with the Monitoring Framework provided in evidence to the hearing of Consent Application: DIS60069613 and that matters in Condition 39 clauses a and b are satisfied.

g. Any amendments to adopted stormwater management plans to certify that the amendments meet Condition 16A clauses a and b.

h. Any amendments or update to Schedule 1 to certify that it incorporates the pipe network and Auckland Urban Areas, as indicated on Auckland Council GIS at that time.

~~33.~~35. In seeking the Manager's certification, the Consent Holder shall provide information necessary to enable certification requirements.

Advice Note

The Manager or the Consent Holder may request the TRG to undertake an assessment and recommendation report to be considered in the certification process.

The Manager, either of their own accord or at the request of the Consent Holder, may appoint an experienced independent person who is a Certified Hearings Chairperson to exercise the Manager's certification function.

~~34.~~36. Amendments to the consent, six-year targets, Schedules and the BPO are authorised under this consent once these proposed amendments are certified by the Manager or a change in conditions of consent has been approved.

Monitoring Strategy

~~35.~~37. Within twelve months of the commencement of this consent, the Consent Holder shall prepare an Auckland Stormwater NDC Monitoring Strategy and associated programme to assess performance and progress against NDC Objectives, Outcomes and six-yearly targets and provide this to the Manager for certification. The Monitoring Strategy and programme shall consider and incorporate to the extent relevant to the NDC and BPO the monitoring elements provided below and depicted in Schedule 6:

a. Long term State of the Environment (SoE) monitoring~~;~~ including, but not limited to the following programmes (or equivalent):

i. Stream water quality;

ii. Stream ecology;

iii. Groundwater quality;

iv. Marine benthic contaminants; and

v. Marine ecology.

b. Freshwater Management Tool (in development);

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c. Healthy Waters monitoring

- Hydrology – Rain and Flow
- Catchment specific monitoring and catchment changes
- Stream assessment

d. Targeted monitoring

- Sediment
- ~~Emerging~~Currently identified as well as emerging contaminants
- Gross Pollutants and Plastics

e. Intervention effectiveness ~~[of the Best Practicable Option]~~ monitoring, including:

- Stormwater Device Performance
- Water Sensitive Design implementation
- Impact of interventions on the receiving environment

f. Safeswim

- Safe Networks

g. Compliance with the conditions and schedules of this consent

h. Ngā tohu o te mauri o te wai (cultural monitoring)

i. Asset monitoring

j. Monitoring of on-site stormwater devices associated with ~~SMPs~~Stormwater Management Plans adopted and implemented under this consent (Schedule 10).

~~36.~~38. The Consent Holder shall ensure that the certified Stormwater NDC Monitoring Programme is implemented in accordance with the requirements of that programme.

~~37.~~39. The Consent Holder may seek changes to the certified Stormwater NDC Monitoring Programme subject to obtaining Manager's certification for these changes and alternative monitoring programmes (Condition 37). Certification shall be based on the following criteria:

a. Ensure the programme monitors the performance of the network and potential impacts to assess whether the objectives and outcomes of the consent are achieved;

b. Provide relevant and reliable information to inform the Triennial and 6-yearly reviews.

provided that the Consent Holder may elect to monitor additional elements without the need for certification provided there is no change or reduction in the approved

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Monitoring Programme. In this case the Manager shall be informed of the additional elements to be included within the Monitoring Programme.

Public information

~~38.~~40. The Consent Holder shall make the following information publicly available and update this information where necessary:

a. Indicative maps of flood hazards.

b. Indicative maps of the public drainage network.

c. Adopted Stormwater Management Plans ~~pursuant to Conditions 13, 14 and 15~~.

d. The Triennial Stormwater Performance Review and Report and the Stormwater Network Discharge Review and Report.

e. The six-yearly review documentation and outcome.

f. Requirements for connections to the public stormwater network including (as relevant):

i. Auckland Council's Code of Practice for Land Development and Sub-division (Stormwater);

ii. Auckland Council's Stormwater Bylaw;

iii. Schedule 4;

iv. Other connection requirements.

Advice Note

Public access can be provided through Council's website/GIS system.

NPSFM Review

40A. When a plan change to the Auckland Unitary Plan that implements the National Policy Statement for Freshwater Management becomes operative (NPSFM Plan Change), the Consent Holder must apply under section 127 of the RMA to change the conditions of this consent if necessary to implement the NPSFM Plan Change. The application under section 127 must be lodged with the Council within 6 months of the NPSFM Plan Change becoming operative; or before any alternative review date expressly specified in the NPSFM Plan Change (in which case the alternative review date applies).

40B. The application under section 127 required by Condition 40A shall include any required changes to the Monitoring Strategy to:

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a. Ensure that the Monitoring Strategy considers the objectives and attributes in the NPSFM Plan Change to the extent relevant to the operation of the stormwater network; and

b. Adopt benchmarks relevant to any targets established in the NPSFM Plan Change that are relevant to the operation of the stormwater network.

Review

~~39.~~41. The conditions of this consent may be reviewed by the Council pursuant to section 128 of the RMA (with the costs of the review process being borne by the Consent Holder) by the giving of notice, pursuant to section 129 of the RMA:

a. In September to December 2023 and thereafter at six yearly intervals;

b. At any time to address any unanticipated adverse effects that arise from the exercise of the consent or to adopt any new requirement of a National Policy Statement, National Environmental Standard.

~~40.~~42. The review under Condition 41 may only be for one or more of the following purposes:

a. To address any material adverse effects on the environment, that in the opinion of the Council, were not assessed by this consent and which may arise from the exercise of the consent, or upon which the exercise of the consent may have an influence, including, but not limited to:

i. modifying existing conditions, to require the Consent Holder to identify the character or nature of any discharges authorised by this Consent and to report the results of any monitoring or investigations to the Manager;

ii. consideration of the conditions of this consent that may relate to the matters contained in s.108(4) of the RMA or any Act in substitution thereof.

iii. inserting conditions, or modifying existing conditions, including the attached schedules to this consent, related to the selection and/or implementation of the BPO to prevent or minimise any adverse effects on the environment resulting from the diversions and discharges authorised by this consent.

b. To insert conditions, or modify existing conditions to the extent necessary to give effect to or reflect any new RMA instruments including any National Policy Statement, National Environmental Standard and the Auckland Unitary Plan, where the Policies, Rules and Standards are material in the opinion of the Council.

c. To take account of changes in the objectives or targets of this consent, or changes in the science or engineering of stormwater discharges resulting in changes to stormwater best practice.

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d. Should there be a change in the accountability for the combined network, resulting in the wastewater authority being no longer fully accountable for the stormwater component of the wastewater network.

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Schedules (These form part of the conditions of consent):

Schedule 1:	Map of the 'urban' area and current extent of the public stormwater network
Schedule 2:	Auckland Stormwater NDC Strategic Objectives, Outcomes and Six year targets
Schedule 3:	Best Practicable Option
Schedule 4:	Requirements for changes to be authorised under the Auckland Stormwater NDC
Schedule 5:	Certification Processes
Schedule 6:	Monitoring Programmes
Schedule 7:	~~Conditions of Consent~~Public Stormwater Network Management Obligations Retained from Existing Consents
Schedule 8:	Process for adopting a Stormwater Management Plan
Schedule 9:	Definitions - Definitions of terms use in the Conditions
Schedule 10:	Adopted or Transferred Stormwater Management Plans

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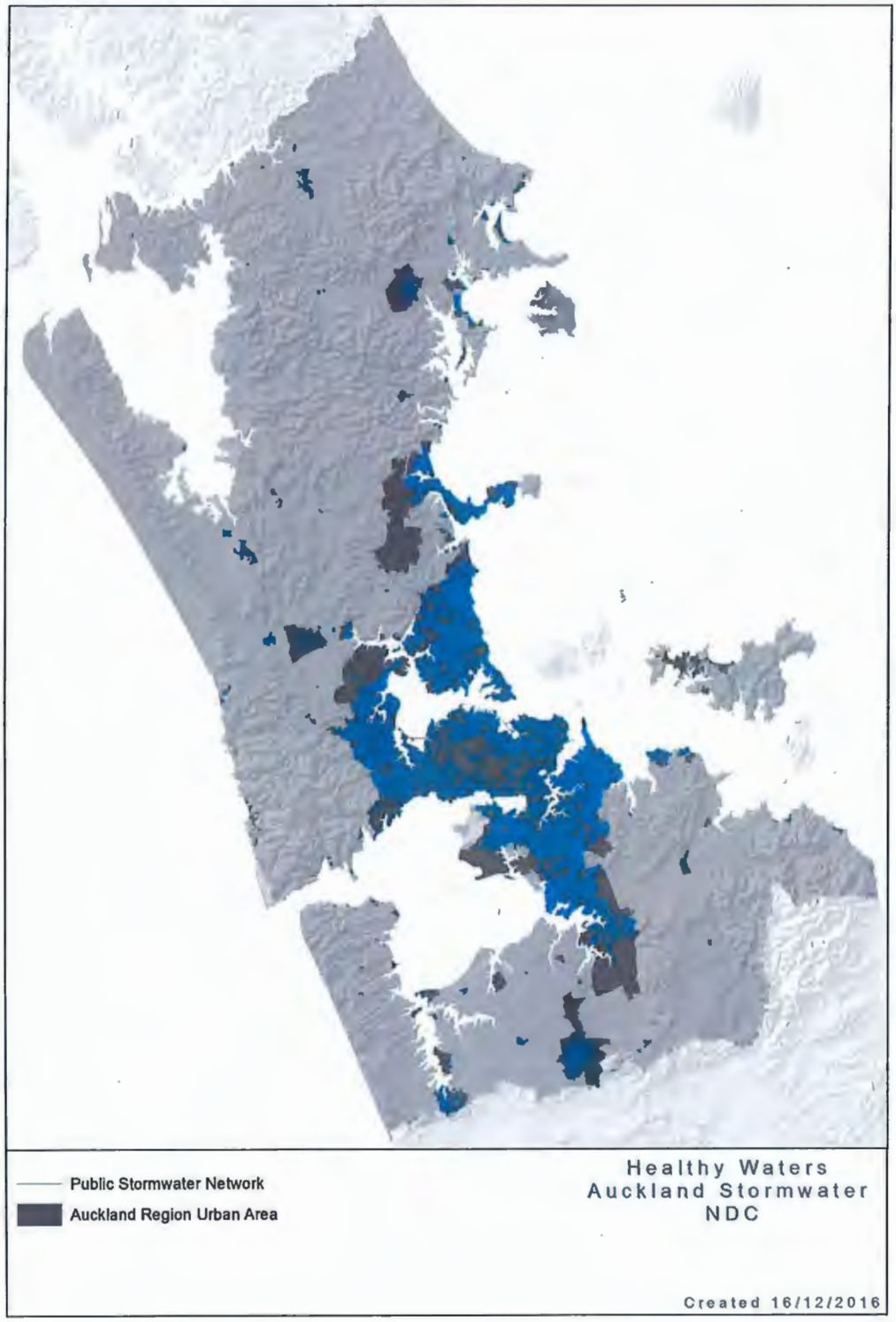
Schedule 1: Map of the 'urban' area and current extent of the public stormwater network



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Schedule 2: Auckland Stormwater NDC Strategic Objectives, Outcomes and Six yearly targets

ISSUE	OBJECTIVES	OUTCOMES	SIX YEAR TARGETS (LTP and AMP performance standards will be updated following reviews)
ISSUE 1: ASSETS			
I1 The ability of the stormwater network to cost effectively meet the needs of current and future generations and achieve and maintain healthy receiving environments, is dependent on the design, quality, maintenance and renewal of built assets and their interaction with private networks and natural systems.	**Safe Communities:** Risk to our communities, including people, property and infrastructure is reduced - ensure that risk to people and property is managed to levels that have been established in consultation with the community, and reduce existing flood risk where it is above these levels. **Healthy and Connected Waterways that provide for te mauri o te wai:** Stream, groundwater and coastal water values are maintained and enhanced and communities are connected with them - utilise streams, aquifers and harbours as integral natural components of Auckland's stormwater system while reducing the adverse effects of stormwater runoff, restoring te mauri o te wai and enhancing our community's connection with, its waterways.	O1.1 Manage existing public stormwater assets to meet agreed levels of service. O1.2 Manage erosion effects caused by discharges from the public stormwater infrastructure. O1.3 Improve existing assets by taking the opportunities from redevelopment where they arise.	*Council Stormwater Infrastructure Performance Standards (all DC)* a) Survey 95% of critical assets every 5 years (AMP) b) Grade 4 critical assets will be repaired or renewed within 5 years (2015 - 2045 AMP) c) Grade 5 highly critical assets will be repaired or renewed within 24 months of identification (AMP) d) Number of blockages in the stormwater network per 100km will be less than 20 per annum (AMP) e) The number of complaints received about the performance of the stormwater network per 1000 properties connected to Auckland Council's stormwater network will be less than 3 per 1000 (LTP) f) Stormwater manholes that pop open in flood events are made safe within two hours: 100% (LTP) *Identified Reviews and Management Improvements for Managing the Council's stormwater infrastructure (all DC)* g) Review vesting processes to ensure that assets from proposed development meet the requirements of AUP, NDC and Stormwater Code of Practice - measured by annual audit of a sample of vested assets. Process improvements as identified through the audit h) Implement identified stormwater asset management improvement measures (ongoing Business as Usual (BAU)) i) Complete asset and risk assessment of public coastal (completed) and stream outfalls (WA programme) - 2017/18 watercourse assessments

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ISSUE	OBJECTIVES	OUTCOMES	SIX YEAR TARGETS (LTP and AMP performance standards will be updated following reviews)
			completed (Figure 9.5) j) Complete condition and risk assessments of large public stormwater dams (completed by 2023) k) Ongoing review of criticality strategies and assessments for all asset types. Renewal strategy has been completed; critical flood risk asset monitoring strategy in place. Improvements implemented as identified (BAU) l) Review complaints to identify potential issues and renewals (BAU, three yearly reporting of summary statistics from issues register) Note: Progress reporting on AMP targets will be undertaken via the Stormwater AMP *Collaboration with Stakeholders* m) Regularly engage with other infrastructure providers on collaborative redevelopment opportunities (Co) n) Implementation and review of the Stormwater Code of Practice and Bylaw (IC)
ISSUE 2: GROWTH			
I2 The way the region grows and develops, and our ability to address existing adverse effects, will determine the quality and health of our freshwater and marine environment.	**Support Growth:** Growth through water sensitive development and provision of quality stormwater infrastructure is enabled - new and re-developed areas are supported by effective stormwater management and good quality infrastructure and development is undertaken in a way that meets the needs of our communities and maintains and enhances natural	O2.1 Align stormwater infrastructure planning and provision to development and intensification priorities. O2.2 Integrate water sensitive design into new and major re-development. This can include promoting source control, at source treatment, bioretention, detention and attenuation, and protection	*Council Stormwater Infrastructure Performance Standards (all DC)* a) Input into stormwater management plans, including those prepared by developers, in response to all high priority growth areas during structure planning and consenting processes b) 95% of formal enquires to stormwater development are responded to within 5 working days (AMP) c) At least 95% of annual capital works programme to enable growth is delivered (AMP) d) >$100,000 of other Council departments or CCOs growth projects are supported by the HW capital investment each year (AMP)

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ISSUE	OBJECTIVES	OUTCOMES	SIX YEAR TARGETS (LTP and AMP performance standards will be updated following reviews)
	water systems.	and enhancement of streams. O2.3 Enable effective land use and stormwater management planning and co-operation between developers and infrastructure providers. O2.4 Establish clear standards and processes for the planning, and development of good quality public stormwater infrastructure, particularly in terms of minimising operational and renewal costs, as well as minimising community, environmental and cultural effects. Q2.5 Develop a coordinated process for management of stormwater approvals including NDC approvals, Stormwater Bylaw, AUP and Engineering Plan Approvals. Q2.6 Develop, in conjunction with industry, a practice note or engineering guideline for stormwater management requirements in a ~~brownfield~~Brownfield development.	*Identified Reviews and Management Improvements for Managing the Council's public stormwater infrastructure* e) Provide updated guidance on the criteria for assets to be vested to Council and connections following approval of the NDC within one year of the granting of consent (DC) f) Facilitate stream rehabilitation through identification of opportunities for offsetting through growth (initial list of offsetting projects completed, ongoing update as new opportunities arise) (IC) *Collaboration with Stakeholders* g) Assist in the implementation of stormwater management/land use requirements under the AUP, including advocating for water sensitive design in new growth / major intensification areas (IC) h) Implementation and review of the Stormwater Code of Practice and Bylaw (IC) i) Assist in development and implementation of guidance on Water Sensitive Design; including Guideline GD04 (IC)
ISSUE 3: FLOODING			

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ISSUE	OBJECTIVES	OUTCOMES	SIX YEAR TARGETS (LTP and AMP performance standards will be updated following reviews)
I3 A large number of buildings (residential and commercial) and critical infrastructure are at risk of flooding and the problem will increase if past land use and development practices continue.	**Safe Communities:** Risk to our communities, including people, property and infrastructure is reduced - ensure that risk to people and property is managed to levels that have been established in consultation with the community, and reduce existing flood risk where it is above these levels.	O3.1 Avoid the increase of existing flooding or creation of new flooding of habitable floors as a result of urban development and intensification. O3.2 Reduce existing flood risk by taking the opportunities from redevelopment where they arise. O3.3 Manage existing flood risk to meet levels of service agreed to keep people and property safe from significant harm from flooding, and minimise disruption to critical social and physical infrastructure connections across the city. O3.4 Improved community understanding of, and resilience to, flood hazards.	*Council Stormwater Infrastructure Performance Standard (all DC)* a) Council flood hazard GIS layer is maintained so that it is current and publicly available; reviewed on a two-yearly basis b) The number of flooding events and the associated number of habitable floors affected: less than 1 per 1000 properties in Auckland per annum (LTP) c) Proportion of habitable floors protected from flooding in a 1 in 10-year storm: > 99% (AMP) d) Total habitable floors protected from flooding in a 1 in 100-year storm: > 97.5% (AMP) e) Median response time to attend a flooding event, measured from the time that Auckland Council receives notification to the time that service personnel reach site: < 2 hours (LTP) f) Major flood protection and control structures are maintained, repaired and renewed to a safe operating standard (AMP – mandatory national measure - however there are no such structures in Auckland) *Identified Reviews and Management Improvements for Managing the Council's public stormwater infrastructure* g) Provide updated guidance on the criteria for assets to be vested to Council following approval of the NDC (as above, within one year of the granting of consent) (DC) h) Flood resilience strategies are in place for habitable floors that are found to be unfeasible to protect from flooding within 10 years: >50% (IC) (AMP) *Collaboration with stakeholders-* i) Work with Civil Defence in identifying areas of flooding that pose a risk to life, as well as to critical infrastructure (Co) j) Assist in the implementation of stormwater management/land use requirements under Unitary Plan, including protection of floodplains and overland flowpaths to prevent flooding from new development (IC) k) Implementation and review of the Stormwater Code of Practice and

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ISSUE	OBJECTIVES	OUTCOMES	SIX YEAR TARGETS (LTP and AMP performance standards will be updated following reviews)
			Bylaw (IC) l) Assist in development and implementation of guidance on Water Sensitive Design, including Guideline GD04 (IC) m) Regularly engage with Local Boards regarding local flooding issues (Co) n) Regularly engage with other infrastructure providers on redevelopment opportunities and identification of critical infrastructure (Co)
ISSUE 4: STREAM HEALTH			
I4 Urbanisation and poor stormwater management adversely affects Auckland's urban streams and can cause a loss of aquatic habitat and biodiversity, resulting in biological degradation and impacts on ecological functioning of streams, on the community and on the mauri of freshwater and Maori customary uses of freshwater resources.	**Healthy and Connected Waterways that provide for te mauri o te wai:** Stream, groundwater and coastal water values are maintained and enhanced and communities are connected with them - utilise streams, aquifers and harbours as integral natural components of Auckland's stormwater system while reducing the adverse effects of stormwater runoff, restoring te mauri o te wai and enhancing our community's connection with, its waterways.	O4.1 Maintain, operate and develop Council's current and future public stormwater network to minimise and reduce adverse effects on streams, groundwater and coastal systems. O4.2 Enhance urban streams and waterways by working collaboratively with key stakeholders such as mana whenua, Local Boards, community groups and the development community to take opportunities where they arise. O4.3 Areas of significant indigenous biodiversity value in terrestrial, freshwater, and coastal	*Council Stormwater Infrastructure Performance Standards* a) Number of fish passage barriers mitigated: average 10 per year (DC) b) The ratio of the length of watercourse consented to be physically improved versus physically degraded in each year (kms Improved ÷ kms Degraded) 3 or more (LTP). (IC, Co, In) *Identified Reviews and Management Improvements for Managing the Council's public stormwater infrastructure* c) Complete asset and risk assessment of public coastal (completed) and stream outfalls (WA programme) - 2017/18 watercourse assessments completed (Figure 9.5) (DC) d) Complete a case study assessment of possible interventions on private streams, taking into account amongst other things ownership, liability and access issues within three years (DC) e) Implement Healthy Waters' Green Infrastructure Policy for Healthy Waters' capital works projects (ongoing BAU) (DC) f) Incorporate the Mauri model[1] into Healthy Waters' capital delivery project assessments - model developed, ongoing implementation for all significant projects (DC, Co)

[1] The Mauri-model is a best practice tool that can be used to effectively measure and assess cultural impacts of stormwater operations and programmes as part of the project scoping, prioritisation and cost-benefit analysis process. See All Issues/Collaborative Outcomes below – this tool will be developed in conjunction with Mana Whenua

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ISSUE	OBJECTIVES	OUTCOMES	SIX YEAR TARGETS (LTP and AMP performance standards will be updated following reviews)
		marine areas are protected from the adverse effects of subdivision, use and development.	g) Develop a region wide decision support system to prioritise interventions for contaminant management purposes (part of Council's implementation of the NPSFM) and implement projects to improve water quality outcomes where opportunities are identified (completed by 2021) (DC) *Collaboration with stakeholders* h) Work with internal and external stakeholders to identify potential collaboration projects for the enhancement of streams (Co) i) Facilitate stream rehabilitation through identification of opportunities for offsetting through growth (initial list of offsetting projects completed, ongoing update as new opportunities arise) (IC) j) Assess feasibility of Council-wide database on stream information (Co) k) Assist in the education and implementation of guidance on Water Sensitive Design; this includes protection of streams, provision of riparian buffers and protection of base flow and other stream enhancement measures (IC) l) Engage with industry and Central Government on initiatives to consider the feasibility of, and where possible implement, source control of key stormwater contaminants.
ISSUE 5: COASTAL HEALTH			
I5 Stormwater contaminants, sourced from urban land use, stream erosion and transport activities, accumulate in low energy marine environments (*such as* estuaries and enclosed harbours) and in some areas, occur at levels that adversely affect marine life, community and Maori	**Healthy and Connected Waterways that provide for te mauri o te wai:** Stream, groundwater and coastal water values are maintained and enhanced and communities are connected with them - utilise streams, aquifers and harbours as integral natural components of Auckland's stormwater system while reducing the adverse effects	As for O4.1 above As for O4.2 above As for O4.3 above	*Council Stormwater Infrastructure Performance Standards* a) Volume of contaminants removed from the stormwater network via Auckland Councils maintenance and renewal programmes: 5,000 tons per annum for catchpits (AMP) (DC) b) Volume of contaminants removed from the stormwater network via Auckland Councils maintenance and renewal programmes: 10,000 tons per annum from de-silting ponds and wetlands (AMP) (DC) *Identified Reviews and Management Improvements for Managing the Council's public stormwater infrastructure*

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ISSUE	OBJECTIVES	OUTCOMES	SIX YEAR TARGETS (LTP and AMP performance standards will be updated following reviews)
cultural values, and once diminished, affects Maori customary uses of coastal resources.	of stormwater runoff, restoring te mauri o te wai and enhancing our community's connection with, its waterways.		c) Provide updated guidance on the criteria for assets to be vested to Council and connections following approval of the NDC within one year of the granting of consent (IC) d) As for Stream Health: Develop a region wide decision support system to prioritise interventions for contaminant management purposes (part of Council's implementation of the NPSFM) and implement projects to improve water quality outcomes where opportunities are identified (completed by 2021) (DC) *Collaboration with stakeholders* e) Work with mana whenua and other parties to identify areas of safe consumption of kaimoana/mahinga kai and other aspects of coastal health and values (NPSFM –part of watershed implementation plans) (Co) f) Assist in the education and implementation of guidance on Water Sensitive Design; this includes provisions in respect of at-source reduction and on-site treatment and management of contaminant generating areas (IC) g) Engage with industry and Central Government on initiatives to consider the feasibility of, and where possible implement, source control of key stormwater contaminants.
ISSUE 6: GROUNDWATER			
I6 Groundwater aquifers underlying urban areas can be adversely affected by land development and stormwater discharges to ground soakage.	**Healthy and Connected Waterways that provide for te mauri o te wai:** Stream, groundwater and coastal water values are maintained and enhanced and communities are connected with them - utilise streams, aquifers and harbours as integral natural components of Auckland's stormwater system	As for O4.1 above As for O4.2 above	*Council Stormwater Infrastructure Performance Standards* a) As for Managing Effects on Coastal Health, focusing on managing contaminants to aquifers *Identified Reviews and Management Improvements for Managing the Council's public stormwater infrastructure* b) As for Managing Effects on Coastal Health, focusing on managing contaminants to aquifers

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ISSUE	OBJECTIVES	OUTCOMES	SIX YEAR TARGETS (LTP and AMP performance standards will be updated following reviews)
	while reducing the adverse effects of stormwater runoff, restoring te mauri o te wai and enhancing our community's connection with, its waterways		c) Prepare guidance for soakage device design, including treatment requirements (TR2013/40 completed, ongoing implementation) *Collaboration with stakeholders* d) Assist in development and implementation of guidance on Water Sensitive Design; including recharge of high use aquifers, peat soils and stream baseflow (IC) e) Input into the implementation and review of the Stormwater Code of Practice and Bylaw (IC) f) Engage with industry and Central Government on initiatives to consider the feasibility of, and where possible implement, source control of key stormwater contaminants.
ISSUE 7: EFFECTS ON WASTEWATER SYSTEM			
I7 In parts of Auckland, particularly where there is a combined stormwater-wastewater network, flood waters are contaminated with wastewater which can cause a public health risk, especially in areas with high contact recreation, and affects the Mauri of the waterbody and thereby has an effect on social and Maori cultural values.	**Healthy and Connected Waterways that provide for te mauri o te wai:** Stream, groundwater and coastal water values are maintained and enhanced and communities are connected with them - utilise streams, aquifers and harbours as integral natural components of Auckland's stormwater system while reducing the adverse effects of stormwater runoff, restoring te mauri o te wai and enhancing our community's connection with, its waterways	As for O4.2 above	*Collaboration with stakeholders (all Co)* a) Develop a strategy for investigation and management of identified issues relating to cross contamination b) Collaborate with Watercare Services Ltd to identify the optimal solution to reduce overflows to the receiving environment for public and environmental health reasons for the central combined sewer area (Western Isthmus Water Quality Improvement Programme (WIWQIP) c) Regularly engage with Watercare Services Ltd and Building Control to identify and assess inflow and infiltration issues and collaboratively design and implement infrastructure upgrades
ISSUE 8: COMMON TO ALL ISSUES			
	Collaborative Outcomes: Stakeholders are engaged to achieve the best stormwater outcomes including for te mauri o	O8.1 Collaborate with Council departments and CCOs that have a key role in delivering positive stormwater	*Council Stormwater Infrastructure Performance Standards (DC)* a) Proportion of mana whenua that are satisfied with Auckland Council's engagement with iwi in relation to stormwater projects: 10/19 or more

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ISSUE	OBJECTIVES	OUTCOMES	SIX YEAR TARGETS (LTP and AMP performance standards will be updated following reviews)
	te wai for present and future generations.	outcomes. O8.2 Build constructive, working relationships with key stakeholders to achieve integrated stormwater solutions and cost effective outcomes. O8.3 Establish effective mechanisms for mana whenua to be appropriately engaged in stormwater management. This includes recognising and actively working to operationalise and integrate the relationship and cultural values mana whenua have with their waterways O8.4 Work with the stormwater industry to continue to identify, refine and communicate best practice and increase industry capacity, resources and knowledge.	(LTP) b) Percentage of projects that contribute to Maori outcomes: at least 95% (AMP) c) >$100,000 of other Council departments or CCOs growth projects are supported by the HW capital investment each year (AMP) d) Compliance with NDC – number of abatement notices, infringement notices, enforcement orders or successful prosecutions: 0 (zero) (AMP) *Identified Reviews and Management Improvements for Managing the Council's public stormwater infrastructure* e) Take into account and be cognisant of current or future Iwi Management Plans (DC) *Collaboration with stakeholders (Co)* f) Develop and integrate, in partnership with mana whenua, best practice tools which can be used to effectively measure and assess cultural impacts of stormwater operations and programmes as part of the project scoping, prioritisation and cost-benefit analysis process (Mauri-model) - model developed, ongoing implementation for all significant projects g) Establish a draft process to operationalise and integrate the relationship and cultural values mana whenua have with their waterways. This includes annual reporting on mana whenua engagement efficacy in order to determine when engagement took place in a project, what the value of the input was, and how mana whenua feedback was (or was not) incorporated h) Regular engagement with iwi to assess implementation via the mana whenua hui
	Prioritised Investment: Benefits from limited resources are maximised by targeting our priorities to achieve the best outcomes we can afford	O8.5 Undertake regional prioritisation that targets investment in the right areas, as agreed within Council, with mana whenua and our community and in accordance with the Auckland Plan vision and	

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ISSUE	OBJECTIVES	OUTCOMES	SIX YEAR TARGETS (LTP and AMP performance standards will be updated following reviews)
		statutory requirements. O8.6 Establish levels of service that are relevant and affordable.	
	Efficient Business: Robust systems, processes, practices and management are implemented to support delivery of stormwater services	O8.7 Undertake efficient and effective network operational, renewals and maintenance programmes. O8.8 Regionalise stormwater management through harmonisation of standards, contracts and business processes. O8.9 Provide fit for purpose information systems and business tools. O8.10 Undertake efficient and effective response to customers and incidents. O8.11 Rationalise network consents and compliance requirements. O8.12 Monitor and report performance.	*Council Stormwater Infrastructure Performance Standards (DC)* As per AMP targets above.

Schedule 3: Best Practicable Option

BPO for Managing Assets

a)	Issue definition
The ability of the stormwater network to cost effectively meet the needs of current and future generations, and achieve and maintain healthy receiving environments at an affordable cost, is dependent on the design, quality, maintenance and renewal of built assets and their interaction with private networks and natural systems.	
b)	**Strategic Objective for Managing Assets**
Safe Communities: Risk to our communities, including people, property and infrastructure is reduced - ensure that risk to people and property is managed to levels that have been established in consultation with the community, and reduce existing flood risk where it is above these levels. **Healthy and Connected Waterways that provide for te mauri o te wai:** Stream, groundwater and coastal water values are maintained and enhanced and communities are connected with them - utilise streams, aquifers and harbours as integral natural components of Auckland's stormwater system while reducing the adverse effects of stormwater runoff, restoring te mauri o te wai and enhancing our community's connection with, its waterways.	
c)	**Proposed NDC Outcomes for Managing Assets**
▪ Manage existing public stormwater assets to meet agreed levels of service. ▪ Manage erosion effects caused by discharges from the public stormwater infrastructure. ▪ Improve existing assets by taking the opportunities from redevelopment where they arise.	
d)	**Stakeholder Feedback from CRE-based Consultation**
The consultation feedback relating to asset management from the four CREs was very closely aligned. There was a high level of support (94%, 74%, 78% and 72% of stakeholders from the Waitematā Harbour, Greater Tāmaki, Manukau Harbour and Hibiscus / East Coast Bays CREs respectively) for 'asset condition and criticality' as the key criterion that should be used to prioritise asset management expenditure. With respect to the Hibiscus / East Coast Bays CRE, the stakeholders wanted to see a focus on above ground built natural assets and stream assets. Managing impacts on existing communities was also seen as important in all CREs, and this criterion was ranked higher than asset condition and criticality in the Hibiscus / East Coast Bays CRE.	
e)	**Regional Prioritisation Processes to Identify Areas of Further Detailed Investigation for Potential Infrastructure Development and Upgrades**
▪ Regional asset renewal strategies (DC): Figure 9-3 depicts the results of the assessment completed under the regional asset renewal strategy for pipes. This identifies, at a high regional level, proportions of potentially critical pipes and the length of critical pipes in each catchment. Critical pipes have been defined based on parameters such as age and material, as well as factors such as their diameter, depth, proximity to critical infrastructure (such as hospitals), those underneath buildings or roads, in high density urban areas, in a landfill and in depressions. ▪ Within Growth Priority Areas, including as part of redevelopment opportunities with other infrastructure providers (refer Table 9 2) (IC, Co).	
f)	**Nature of Further Detailed Investigations and Potential Infrastructure Upgrades that may be Implemented to Address Confirmed Issues**
▪ Critical pipes will be subject to further assessment through CCTV monitoring and, where issues are confirmed, potential infrastructure upgrades will be investigated (DC). Potential infrastructure upgrades that can be used to address critical pipes include: ▫ Pipe rehabilitation/replacement ▫ Diversion a portion or the whole upstream catchment ▫ Increasing hydraulic capacity ▫ Extend existing reticulation system to un-reticulated properties ▫ Daylighting/naturalisation ▫ Improved channel conveyance The recommended upgrade for an area will be reviewed and selected based on a range of factors including feasibility of implementation, effectiveness, and cost, as well as opportunities for water sensitive solutions. It must be recognised that, after further investigation, some critical pipes may not be practically or economically resolved through infrastructure upgrade and therefore will need to be managed using other mechanisms.	

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g)	**Management Processes other than the Identification of Infrastructure Development and Upgrades**

The following management applies to all public stormwater infrastructure for managing assets:

- Ensure adequate asset maintenance of existing stormwater network through preventive and reactive programmes (DC).
- Enforce appropriate performance standards on connections/vested assets through the Stormwater Bylaw (IC).
- Maintain and update asset management database (DC).
- Continue to develop, review and implement criticality assessment strategies for all asset types (DC).
- Respond to complaints and regularly review complaints to identify potential issues and renewals (DC).
- Regularly work with other infrastructure providers on redevelopment opportunities, including incorporation of water sensitive design (Co).
- Work collaboratively with other departments and stakeholders when delivering projects to ensure that opportunities to add value and minimise disruption are realised (Co).

h)	**Proposed six-year NDC targets**

Council Stormwater Infrastructure Performance Standards (all DC)

a) Survey 95% of critical assets every 5 years (AMP).

b) Grade 4 critical assets will be repaired or renewed within 5 years (2015 -2045 AMP).

c) Grade 5 highly critical assets will be repaired or renewed within 24 months of identification (AMP).

d) Number of blockages in the stormwater network per 100km will be less than 20 per annum (AMP).

e) The number of complaints received about the performance of the stormwater network per 1000 properties connected to Auckland Council's stormwater network will be less than 3 per 1000 (LTP).

f) Stormwater manholes that pop open in flood events are made safe within two hours: 100% (LTP).

Identified Reviews and Management Improvements for Managing the Council's stormwater infrastructure

g) Review vesting processes to ensure that assets from proposed development meet the requirements of AUP, NDC and Stormwater Code of Practice - measured by annual audit of a sample of vested assets. Process improvements as identified through the audit (DC).

h) Implement identified stormwater asset management improvement measures (ongoing BAU) (DC).

i) Complete asset and risk assessment of public coastal (completed) and stream outfalls (WA programme) - 2017/18 watercourse assessments completed (Figure 9.5) (DC).

j) Complete condition and risk assessments of large public stormwater dams (completed by 2023) (DC).

k) Ongoing review of criticality strategies and assessments for all asset types. Renewal strategy has been completed; critical flood risk asset monitoring strategy in place. Improvements implemented as identified (BAU) (DC).

l) Review complaints to identify potential issues and renewals (BAU, three yearly reporting of summary statistics from issues register) (DC).

Note: Progress reporting on AMP targets will be undertaken via the Stormwater AMP.

Collaboration with Stakeholders

m) Regularly engage with other infrastructure providers on collaborative redevelopment opportunities (Co).

n) Implementation and review of the Stormwater Code of Practice and Bylaw (IC).

a)	**Issue definition**
The way the region grows and develops, and our ability to address existing adverse effects, will determine the quality and health of our freshwater and marine environment.	
b)	**Strategic Objective for Managing Effects of Growth**
Support Growth: Growth through water sensitive development and provision of quality stormwater infrastructure is enabled - new and re-developed areas are supported by effective stormwater management and good quality infrastructure and development is undertaken in a way that meets the needs of our communities and maintains and enhances natural water systems.	
c)	**Proposed NDC Outcomes for Managing Effects from Growth**
▪	Align stormwater infrastructure planning and provision to development and intensification priorities.
▪	Integrate water sensitive design into new and major re-development. This can include promoting source control, at source treatment, bioretention, detention and attenuation, and protection and enhancement of streams.
▪	Enable effective land use and stormwater management planning and co-operation between developers and infrastructure providers.
▪	Establish clear standards and processes for the planning, development and vesting of good quality public stormwater infrastructure, particularly in terms of minimising operational and renewal costs, as well as minimising community, environmental and cultural effects.
▪	Develop a coordinated process for management of stormwater approvals including NDC approvals, Stormwater Bylaw, AUP and Engineering Plan Approvals.
▪	Develop, in conjunction with industry, a practice note or engineering guideline for stormwater management requirements in a ~~brownfield~~Brownfield development
d)	**Stakeholder Feedback from CRE-based Consultation**
In all four CREs, the 'sensitivity of the receiving environment' criterion was ranked highly in respect of prioritising stormwater resources for growth. In the Waitematā Harbour and Greater Tāmaki CREs, there was a clear preference for 'council-identified priorities' relating to growth and an emphasis on a 'partnership-led' approach to growth for the Hibiscus / East Coast Bays CRE. All three CREs showed a general lack of support (low ranking) for developer-led priorities. The Manukau Harbour CRE stakeholders, however, showed a high level of support for 'development-led' growth.	
e)	**Regional Prioritisation Processes to Identify Areas for Further Detailed Investigation of Potential Infrastructure Development and Upgrades**
▪	Alignment with Council Growth Priority Areas (IC) Healthy Waters will align its work with growth priority areas as identified by the council. The growth priority areas identified by Council in late 2015 are shown in Figure 9-4. These areas include Special Housing Areas (see Figure 3-4), and other development identified under the Forward Land and Infrastructure Programme (FLIP) and the Future Urban Land Supply Strategy (FULSS). It should be noted that these areas are periodically updated by Council, and as such Healthy Waters will need to review and realign programmes as work is delivered and priorities change.
f)	**Nature of Further Detailed Investigations and Potential Infrastructure Upgrades that may be Implemented to Address Confirmed Issues**
▪	Healthy Waters will work with Council planners, the Development Project Office and developers in the compiling stormwater management plans for these growth areas, promoting water sensitive design (IC).
▪	Heathy Waters will continue to deliver its capital works programme to support growth including renewals, upgrades and performance improvements.
g)	**Management Processes other than the Identification of Infrastructure Development and Upgrades**
The following management applies to all public stormwater infrastructure for managing growth:	
▪	Set out clear performance and connection standards for stormwater assets to be vested to Council from development or for new/modified connections (Schedule 4) (DC). ~~Where a development seeking to vest assets cannot meet these standards, it must demonstrate to and obtain approval from Healthy Waters that the proposed stormwater management approach and infrastructure is fit for purpose and consistent with the NDC Outcomes.~~

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▪	Provide information to the development community such as flood modelling, design guidance and requirements, and clear asset information (IC).
▪	Work with other infrastructure providers to identify collaborative upgrade projects and redevelopment opportunities, including opportunities for incorporating water sensitive design (CO).
▪	Work collaboratively with other departments and stakeholders when delivering projects to ensure that opportunities to add value and minimise disruption are realised (CO).
▪	Refine and communicate guidance on stormwater management plan requirements (DC)
h)	**Proposed six-year NDC targets**
Council Stormwater Infrastructure Performance Standards (all DC)	
a)	Input into stormwater management plans, including those prepared by developers, in response to all high priority growth areas during structure planning and consenting processes.
b)	95% of formal enquires to stormwater development are responded to within 5 working days (AMP).
c)	At least 95% of annual capital works programme to enable growth is delivered (AMP).
d)	>$100,000 of other Council departments or CCO's growth projects are supported by the HW capital investment each year (AMP).
Identified Reviews and Management Improvements for Managing the Council's public stormwater infrastructure	
e)	Provide updated guidance on the criteria for assets to be vested to Council and connections following approval of the NDC within one year of the granting of consent (DC).
f)	Facilitate stream rehabilitation through identification of opportunities for offsetting through growth (initial list of offsetting projects completed, ongoing update as new opportunities arise) (IC/Co).
Collaboration with Stakeholders	
g)	Assist in the implementation of stormwater management/land use requirements under the AUP, including advocating for water sensitive design in new growth / major intensification areas (IC).
h)	Implementation and review of the Stormwater Code of Practice and Bylaw (IC).
i)	Assist in the development and implementation of guidance on Water Sensitive Design, including Guideline GD04 (IC).

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BPO for Managing Flooding

a)	**Issue definition**
A large number of buildings (residential and commercial) and critical infrastructure are at risk of flooding and the problem will increase if past land use and development practices continue.	
b)	**Strategic Objectives for Managing Flooding**
Safe Communities: Risk to our communities, including people, property and infrastructure is reduced - ensure that risk to people and property is managed to levels that have been established in consultation with the community, and reduce existing flood risk where it is above these levels.	
c)	**Proposed NDC Outcomes for Managing Flooding**
▪ Avoid the increase of existing flooding or creation of new flooding of habitable floors as a result of urban development and intensification. ▪ Reduce existing flood risk by taking the opportunities from redevelopment where they arise. ▪ Manage existing flood risk to meet levels of service agreed to keep people and property safe from significant harm from flooding, and minimise disruption to critical social and physical infrastructure connections across the city. ▪ Improve community understanding of, and resilience to, flood hazards.	
d)	**Stakeholder Feedback from CRE-based Consultation**
Whilst initially it appears that the stakeholders in each CRE have a different perspective on the importance of the criteria, 'flooding occurrence/frequency' has the highest percentage of stakeholders ranking it as high. It is noted that the criterion 'public safety and protecting critical infrastructure' is not fully comparable across all four CREs as this was a new criterion introduced through the Greater Tāmaki, Manukau Harbour and Hibiscus / East Coast Bays consultation processes. However, the results show that this is of very high importance to stakeholders in these three CREs.	
e)	**Regional Prioritisation Processes to Identify Areas for Further Detailed Investigation of Potential Infrastructure Development and Upgrades**
▪ Within Growth Priority Areas, including as part of redevelopment opportunities with other infrastructure providers (refer Table 9 2) (IC, Co). Modelling is key to understanding the potential effect of new areas of growth on flood risks to both existing dwellings and new development, and is a fundamental component of growth stormwater management planning. Maintaining up to date flood modelling for growth areas is therefore a priority. ▪ Regional assessment of number of habitable floors affected by a 100-year flood event (DC). Regional assessments have been completed to identify, at a high regional level, the stream catchments with the highest potential number of habitable floors at risk of flooding in the 100-year rain event. This is based on regional modelling undertaken for the 100-year floodplain, overland flowpath, and flood prone areas.	
f)	**Nature of Further Detailed Investigations and Potential Infrastructure Upgrades that may be Implemented to Address Confirmed Issues**
▪ Modelling is updated to ensure it remains fit for purpose and provides the best available information for asset renewal/upgrade and consent and development needs. This is a continual and cyclical process as catchment changes (new development, infrastructure changes etc) occur. Flood hazard maps are made available on Council GIS system. (DC). ▪ Infrastructure upgrades will be investigated for areas with a high demand for growth, as well as the highest numbers of habitable floors affected in the region or as opportunities arise through redevelopment (DC). If after the detailed modelling, flooding issues are confirmed to be the result of the public stormwater infrastructure, potential upgrades will be investigated and assessed. The types of infrastructure upgrades that can be put in place to address flooding include: ▫ Constructed wetlands/ponds designed for detention ▫ Divert a portion or the whole upstream catchment ▫ Pipe rehabilitation, increasing hydraulic capacity and extend existing reticulation system to un-reticulated properties ▫ Install debris barrier or screen ▫ Provision of primary /secondary drainage systems/ overland flow paths ▫ Construction of stopbanks and floodways	

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- Daylighting/ naturalisation
- Improved channel conveyance.

The recommended infrastructure upgrade selected will be dependent on various factors including feasibility of implementation, effectiveness, and cost, and include opportunities for water sensitive design/green infrastructure options. It should be recognised that after further investigation, some flooding may not be practically or economically resolved through infrastructure upgrades and therefore will need to be managed using other mechanisms.

g) Management Processes other than the Identification of Infrastructure Development and Upgrades

The following management applies to all public stormwater infrastructure, including within non-priority areas:

- Ensure adequate asset maintenance of existing stormwater network through preventive and reactive programmes, particularly in flooding hotspot areas. This includes catchpit cleaning and clearing of high risk inlets (DC).
- Enforce appropriate performance standards on connections/vested assets through the Stormwater Bylaw (IC).
- Assist in the enforcement of appropriate design standards and building controls on private properties (e.g. vehicle crossings, building floor levels, overland flow paths) through the Stormwater Bylaw, particularly in flooding hotspot areas or areas that are likely to be susceptible to flooding (IC).
- Provide flood modelling, design guidance/requirements, vesting requirements, and clear asset information (DC).
- Develop flood resilience strategies for habitable floors that are found to be unfeasible to protect from flooding (DC).
- Assist Civil Defence in flood prediction and warning, as well as in flood recovery planning (Co).
- Work with other infrastructure providers on identifying and addressing flooding through redevelopment opportunities, as well as the identification of critical infrastructure (Co).
- Work collaboratively with other departments and stakeholders when delivering projects to ensure that opportunities to add value and minimise disruption are realised (Co).
- Engage with Local Boards to identify any ongoing flooding issues (Co).

h) Proposed six-year NDC targets

Council Stormwater Infrastructure Performance Standard (all DC)

a) Council flood hazard GIS layer is maintained so that it is current and publicly available; reviewed on a two-yearly basis.

b) The number of flooding events and the associated number of habitable floors affected: less than 1 per 1000 properties in Auckland per annum (LTP).

c) Proportion of habitable floors protected from flooding in a 1 in 10-year storm: > 99% (AMP).

d) Total habitable floors protected from flooding in a 1 in 100-year storm: > 97.5% (AMP).

e) Median response time to attend a flooding event, measured from the time that Auckland Council receives notification to the time that service personnel reach site: < 2 hours (LTP).

f) Major flood protection and control structures are maintained, repaired and renewed to a safe operating standard (AMP– mandatory national measure - however there are no such structures in Auckland).

Identified Reviews and Management Improvements for Managing the Council's public stormwater infrastructure

g) Provide updated guidance on the criteria for assets to be vested to Council following approval of the NDC (as above, within one year of the granting of consent) (IC).

h) Flood resilience strategies are in place for habitable floors that are found to be unfeasible to protect from flooding within 10 years: >50% (In) (AMP).

Collaboration with stakeholders-

i) Work with Civil Defence in identifying areas of flooding that pose a risk to life, as well as to critical infrastructure (Co).

j) Assist in the implementation of stormwater management/land use requirements under the Unitary Plan, including protection of floodplains and overland flowpaths to prevent flooding from new development (IC).

k) Implementation and review of the Stormwater Code of Practice and Bylaw (IC).

l) Assist in development and implementation of guidance on Water Sensitive Design, including Guideline GD04 (IC).

m) Regularly engage with Local Boards regarding local flooding issues (Co).

n) Regularly engage with other infrastructure providers on redevelopment opportunities and identification of critical infrastructure (Co).

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BPO for Managing Effects on Stream Health

a)	**Issue definition**
Urbanisation and poor stormwater management adversely affects Auckland's urban streams and can cause a loss of aquatic habitat and biodiversity, resulting in biological degradation and impacts on ecological functioning of streams, on the community and on the mauri of freshwater and Maori customary uses of freshwater resources.	
b)	**Strategic Objective for Managing Effects on Stream Health**
Healthy and Connected Waterways that provide for te mauri o te wai: Stream, groundwater and coastal water values are maintained and enhanced and communities are connected with them - utilise streams, aquifers and harbours as integral natural components of Auckland's stormwater system while reducing the adverse effects of stormwater runoff, restoring te mauri o te wai and enhancing our community's connection with, its waterways.	
c)	**Proposed NDC Outcomes for Managing Effects on Stream Health**
▪	Maintain, operate and develop Council's current and future public stormwater network to minimise and reduce adverse effects on streams, groundwater and coastal systems.
▪	Enhance urban streams and waterways by working collaboratively with key stakeholders such as mana whenua, Local Boards, community groups and the development community to, take opportunities to where they arise.
▪	Areas of significant indigenous biodiversity value in terrestrial, freshwater, and coastal marine areas are protected from the adverse effects of subdivision, use and development.
d)	**Stakeholder Feedback from CRE-based Consultation**
In general, the feedback relating to urban stream management and freshwater resources was relatively consistent across the CREs. The 'ecological value/ greatest ecological benefit' and 'opportunities to leverage outcomes' criteria received the most support from stakeholders. A new criterion, 'holistic management of streams' was introduced as part of the Greater Tāmaki, Manukau Harbour and Hibiscus / East Coast Bays CRE consultation processes, which also received a high level of support in all three CREs.	
e)	**Regional Prioritisation Processes to Identify Areas for Further Detailed Investigation of Potential Infrastructure Development and Upgrades**
▪	Within Growth Priority Areas, including as part of redevelopment opportunities (IC, Co). Healthy Waters uses Watercourse Assessments (previously called Watercourse Management Plans and Stream Surveys) to identify issues within streams, such as fish barriers, erosion, and status of ecological health. Healthy Waters is also actively working with developers to retain and enhance stream values, particularly in new growth areas.
▪	Identified adverse effects caused by public infrastructure located on public land (DC). Issues identified through Watercourse Assessments are entered in a central database for, where relevant and associated with the operation and management of the stormwater network, programming and action.
f)	**Nature of Further Detailed Investigations and Potential Infrastructure Upgrades that may be Implemented to Address Confirmed Issues**
▪	Current priority is the investigation and remediation of Council-owned infrastructure related issues, particularly outfall erosion.
▪	An on-going regional programme of remediating fish passage barriers is currently being implemented.
▪	Issues associated with undertaking works in private streams is currently being reviewed, as matters such as future responsibilities, ease of access, and ability to create easements to allow for future access for maintenance are key considerations that must be managed.
▪	Issues identified in Watercourse Assessments are also reported to other stakeholders. Opportunities for partnering are encouraged, and Healthy Waters works collaboratively in delivering some of these. Potential infrastructure upgrades to address effects on streams can include: ▫ Outfall rehabilitation, debris barrier or screen ▫ Removal of barriers to fish passage ▫ Daylighting, channel naturalisation, riparian enhancement ▫ Reduce peak flows by constructed wetlands/ ponds, rain garden ▫ Manage flows, including base flows, by rain tanks, vegetated swales, rain gardens, permeable paving etc. The specific upgrade selected will be dependent on various factors including feasibility of implementation, effectiveness, and cost, and includes the assessment of water sensitive design/green infrastructure options. It should be recognised that: some effects on streams may not be practically or economically resolved through infrastructure upgrades and

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	therefore will need to be managed using other mechanisms (see below).
g)	**Management Processes other than the Identification of Infrastructure Development and Upgrades**
The following management applies to all public stormwater infrastructure: ▪ Apply appropriate performance standards on connections/vested assets through the Stormwater Bylaw (IC). ▪ Ensure adequate asset maintenance of the existing stormwater network through preventive (proactive) and reactive programmes (DC). ▪ Support public education programmes to: enhance riparian planting, maintain private streams, discourage litter, preventing illegal dumping of contaminants (e.g. chemicals, paint, and yard waste) into storm drains discharging to streams (In). ▪ Complete and implement findings of assessment of possible interventions on private streams, taking into account amongst other things ownership, liability and access issues (DC, Co). ▪ Implement Healthy Waters' Green Infrastructure Policy to its capital works projects and expand it to include the Mauri model (see below) (DC, Co). ▪ Assist in the education and implementation of guidance on Water Sensitive Design Guideline (GD04) and other educational material for schools and community groups (IC). ▪ Work collaboratively with other departments and stakeholders when delivering projects to ensure that opportunities to add value and minimise disruption are realised (Co). ▪ Work with stakeholders such as the other Council teams, CCOs, Local Boards and iwi through to identify and implement potential collaboration projects for the enhancement of streams (Co).	
h)	**Proposed six-year NDC targets**
Council Stormwater Infrastructure Performance Standards a) Number of fish passage barriers mitigated: average 10 per year (DC). b) The ratio of the length of watercourse consented to be physically improved versus physically degraded in each year (kms Improved ÷ kms Degraded) 3 or more (LTP) (IC, Co, In). *Identified Reviews and Management Improvements for Managing the Council's public stormwater infrastructure* c) Complete asset and risk assessment of public coastal (completed) and stream outfalls (WA programme) - 2017/18 watercourse assessments completed (Figure 9.5) (DC). d) Complete a case study assessment of possible interventions on private streams, taking into account amongst other things ownership, liability and access issues within three years (DC). e) Implement Healthy Waters' Green Infrastructure Policy for Healthy Waters' capital works projects (ongoing BAU) (DC). f) Incorporate the Mauri model into Healthy Waters' capital delivery project assessments - model developed, ongoing implementation for all significant projects (DC). g) Develop a region wide decision support system to prioritise interventions for contaminant management purposes (part of Council's implementation of the NPSFM) and implement projects to improve water quality outcomes where opportunities are identified (completed by 2021) (DC). *Collaboration with stakeholders* h) Work with internal and external stakeholders to identify potential collaboration projects for the enhancement of streams (Co). i) Facilitate stream rehabilitation through identification of opportunities for offsetting through growth (initial list of offsetting projects completed, ongoing update as new opportunities arise) (IC). j) Assess feasibility of Council-wide database on stream information (Co). k) Assist in the education and implementation of guidance on Water Sensitive Design; this includes protection of streams, provision of riparian buffers and protection of base flow and other stream enhancement measures (IC). l) Engage with industry and Central Government on initiatives to consider the feasibility of, and where possible implement, source control of key stormwater contaminants.	

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BPO for Managing Effects on Coastal Health

a)	**Issue definition**
Stormwater contaminants, sourced from urban land use, stream erosion and transport activities, accumulate in low energy marine environments (such as estuaries and enclosed harbours) and in some areas, occur at levels that adversely affect marine life, community and Maori cultural values, and once diminished, affects Maori customary uses of coastal resources.	
b)	**Strategic Objective for Managing Effects on Coastal Health**
Healthy and Connected Waterways that provide for te mauri o te wai: Stream, groundwater and coastal water values are maintained and enhanced and communities are connected with them - utilise streams, aquifers and harbours as integral natural components of Auckland's stormwater system while reducing the adverse effects of stormwater runoff, restoring te mauri o te wai and enhancing our community's connection with, its waterways.	
c)	**Proposed NDC Outcomes for Managing Effects on Coastal Health**
▪	Maintain, operate and develop Council's current and future public stormwater network to minimise and reduce adverse effects on streams, groundwater and coastal systems.
▪	Enhance urban waterways by working collaboratively with key stakeholders such as mana whenua, Local Boards, community groups and the development community to take opportunities where they arise.
▪	Areas of significant indigenous biodiversity value in terrestrial, freshwater, and coastal marine areas are protected from the adverse effects of subdivision, use and development.
d)	**Stakeholder Feedback from CRE-based Consultation**
There was consistency in the ranking of criteria for contaminant management in the marine receiving environment for the four CREs. It highlights that there should be a general focus on 'contaminant loads and dispersal' and 'marine ecology' when prioritising future expenditure. It is interesting to note that managing existing contaminant levels was particularly important for stakeholders within the Hibiscus / East Coast Bays CRE. 'Holistic contaminant management' ranks high for the Manukau Harbour CRE. This is likely due to the high level of concern voiced by stakeholders over wastewater contaminating the Manukau Harbour.	
e)	**Regional Prioritisation Processes to Identify Areas for Further Detailed Investigation of Potential Infrastructure Development and Upgrades Investigation**
▪	Assessment based on criteria to be developed through the implementation of the NPSFM (DC). Council is progressing its implementation of the NPSFM. An element of this is the development of a region wide decision support system to prioritise interventions for contaminant management purposes.
f)	**Nature of Further Detailed Investigations and Potential Infrastructure Upgrades that may be Implemented to Address Confirmed Issues**
The proposed next step is to develop a region wide decision support system to prioritise interventions for contaminant management as part of the NPSFM implementation. In addition to identified stormwater management interventions, opportunities for stormwater quality improvements will be assessed as part of stormwater capital works projects. Where stormwater infrastructure issues and opportunities are confirmed, potential upgrades will be investigated. These can comprise: ▪ Larger scale treatment such as constructed wetlands, ponds and swales ▪ Smaller scale management devices targeting small areas, such as: sand filters and rain gardens, permeable paving ▪ Soakage pre-treatment ▪ Debris barrier or coarse pollutant screen ▪ Propriety treatment devices, such as StormFilter™, UpFlo™ Filter, CDS Filternator™, CDS Unit, CleansAll Unit, Downstream Defender, Tetra traps etc. Recommended upgrades to mitigate existing adverse effects will be dependent on various factors including feasibility of implementation, effectiveness, and cost. Water sensitive design/green infrastructure will be considered. It should be recognised that contaminant mitigation may not be practically or economically resolved through infrastructure upgrades and therefore will need to be managed using other mechanisms (such as land use change/redevelopment).	
g)	**Management Processes other than the Identification of Infrastructure Development and Upgrades**
The following management applies to all public stormwater infrastructure, including within non-priority areas: ▪ Apply appropriate performance standards on connections/vested assets through the Stormwater Bylaw (IC).	

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- Ensure adequate maintenance of the existing stormwater network, including catchpit cleaning and maintenance/rehabilitation of treatment ponds, wetlands and other treatment devices (DC).
- Support public education programmes to enhance riparian planting, maintain private streams, discourage littering, and to prevent illegal dumping of contaminants (e.g. chemicals, paint, and yard waste) into storm drains discharging to sea (In).
- Assist in the education and implementation of guidance on Water Sensitive Design Guideline (GD04) and the development and implementation of future WSD design guidance (IC).
- Work collaboratively with other departments and stakeholders when delivering projects to ensure that opportunities to add value and minimise disruption are realised (Co).
- Work with stakeholders such as the other Council teams, CCOs, Local Boards and iwi through to identify potential collaboration projects (Co).

h) Proposed 6 yearly NDC targets

Council Stormwater Infrastructure Performance Standards

a) Volume of contaminants removed from the stormwater network via Auckland Council's maintenance and renewal programmes: 5,000 tons per annum for catchpits (AMP) (DC).

b) Volume of contaminants removed from the stormwater network via Auckland Council's maintenance and renewal programmes: 10,000 tons per annum from de-silting ponds and wetlands (AMP) (DC).

Identified Reviews and Management Improvements for Managing the Council's public stormwater infrastructure

c) Provide updated guidance on the criteria for assets to be vested to Council and connections following approval of the NDC within one year of the granting of consent (IC).

d) As for stream health:

Develop a region wide decision support system to prioritise interventions for contaminant management purposes (part of Council's implementation of the NPSFM) and implement projects to improve water quality outcomes where opportunities are identified (DC).

Collaboration with stakeholders

e) Work with mana whenua and other parties to identify areas of safe consumption of kaimoana/mahinga kai and other aspects of coastal health and values (NPSFM –part of watershed implementation plans) (Co).

f) Assist in the education and implementation of guidance on Water Sensitive Design; this includes provisions in respect of at-source reduction and on-site treatment and management of contaminant generating areas (IC).

g) Engage with industry and Central Government on initiatives to consider the feasibility of, and where possible implement, source control of key stormwater contaminants.

BPO for Managing Effects on Groundwater

a)	**Issue definition**
Groundwater aquifers underlying urban areas can be adversely affected by land development and untreated stormwater discharges to ground soakage.	
b)	**Strategic Objective for Managing Effects on Groundwater**
Healthy and Connected Waterways that provide for te mauri o te wai: Stream, groundwater and coastal water values are maintained and enhanced and communities are connected with them - utilise streams, aquifers and harbours as integral natural components of Auckland's stormwater system while reducing the adverse effects of stormwater runoff, restoring te mauri o te wai and enhancing our community's connection with, its waterways.	
c)	**Proposed NDC Outcomes for Managing Effects on Groundwater**
▪ Maintain, operate and develop Council's current and future public stormwater network to minimise and reduce adverse effects on streams, groundwater and coastal systems. ▪ Enhance urban waterways by working collaboratively with key external stakeholders such as mana whenua, Local Boards, community groups and the development community to take opportunities where they arise.	
d)	**Stakeholder Feedback from CRE-based Consultation**
In all four CREs, 'treatment/ disposal of stormwater into ground' was ranked as the highest criterion for prioritisation. This criterion supported the general feedback received from stakeholders in the CREs who felt a precautionary management approach to stormwater disposal to ground should be adopted.	
e)	**Regional Prioritisation Processes to Identify Areas for Further Detailed Investigation for Potential Infrastructure Development and Upgrades**
▪ Assessment based on contaminant loading and receiving environment (quality sensitive aquifers). The Auckland Unitary Plan has identified water quality sensitive aquifers in the region. The priority for further assessment are those quality sensitive aquifers that are utilised for stormwater disposal primarily the Auckland Isthmus volcanic aquifers and Pukekohe volcanic aquifers.	
f)	**Nature of Further Detailed Investigations and Potential Infrastructure Upgrades that may be Implemented to Address Confirmed Issues on Groundwater**
Infrastructure upgrades to manage effects on groundwater health can include measures such as: ▪ Soakage pre-treatment, utilising a range of treatment devices. Recommended upgrades to mitigate adverse effects will be dependent on various factors including feasibility of implementation, effectiveness, and cost, and will include water sensitive design opportunities.	
g)	**Management Processes other than the Identification of Infrastructure Development and Upgrades**
The following management applies to all public stormwater infrastructure: ▪ Enforce appropriate design standards and building controls on private properties (e.g through soakage) through the Stormwater Bylaw/Building Act (IC). ▪ Ensure adequate asset maintenance of existing stormwater network through preventive and reactive programmes, in particular through catchpit cleaning in soakage areas (DC). ▪ Support public education programmes to enhance riparian planting, maintain private streams, discourage of litter, preventing illegal dumping of contaminants (e.g. chemicals, paint, and yard waste) into storm drains discharging to groundwater (In). ▪ Assist in the education and implementation of guidance on Water Sensitive Design Guideline (GD04) and the development and implementation of future WSD design guidance (IC). ▪ Work with stakeholders such as the other Council teams, CCOs, Local Boards and iwi through to identify potential collaboration projects (Co).	
h)	**Proposed six-year NDC targets**
Council Stormwater Infrastructure Performance Standards a) As for Managing Effects on Coastal Health, focusing on managing contaminants to aquifers. *Identified Reviews and Management Improvements for Managing the Council's public stormwater infrastructure* b) As for Managing Effects on Coastal Health, focusing on managing contaminants to aquifers. c) Prepare guidance for soakage device design, including treatment requirements (TR2013/40 completed, ongoing	

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	implementation) (DC).
	Collaboration with stakeholders
d)	Assist in development and implementation of guidance on Water Sensitive Design; including recharge of high use aquifers, peat soils and stream baseflow (IC).
e)	Input into the implementation and review of the Stormwater Code of Practice and Bylaw (IC).
f)	Engage with industry and Central Government on initiatives to consider the feasibility of, and where possible implement, source control of key stormwater contaminants.

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BPO for Managing the effects on wastewater network

a)	**Issue definition**
In parts of Auckland, particularly where there is a combined stormwater-wastewater network, flood waters are contaminated with wastewater which can cause a public health risk, especially in areas with high contact recreation, and affects the Mauri of the waterbody and thereby has an effect on social and Maori cultural values.	
b)	**Strategic Objective for Managing Effects on the Wastewater Network**
Healthy and Connected Waterways that provide for te mauri o te wai: Stream, groundwater and coastal water values are maintained and enhanced and communities are connected with them - utilise streams, aquifers and harbours as integral natural components of Auckland's stormwater system while reducing the adverse effects of stormwater runoff, restoring te mauri o te wai and enhancing our community's connection with, its waterways.	
c)	**Proposed NDC Outcomes for Managing Effects on the Wastewater Network**
▪	Enhance urban waterways by working collaboratively with key stakeholders such as mana whenua, Local Boards, community groups and the development community to take opportunities where they arise.
d)	**Stakeholder Feedback from CRE-based Consultation**
Stakeholders from all CREs ranked 'public health risk' and 'environmental risk' as the two highest criteria for prioritising stormwater effects on the wastewater network. It is interesting to note, however, that stakeholders in the Greater Tāmaki and Hibiscus / East Coast Bays CREs ranked 'environmental risk' higher that 'public health risk'. Despite this, the percentage of stakeholders ranking each of the criteria as "high" was very similar. A lower percentage of stakeholders from the Manukau Harbour and Hibiscus/ East Coast Bays CREs ranked these two criteria as high.	
e)	**Regional Prioritisation Processes to Identify Areas for Further Detailed Investigation of Potential Infrastructure Development and Upgrades**
Infrastructure upgrades to the wastewater network will be led by Watercare Services Ltd, with Healthy Waters assisting where it can effectively contribute to improved outcomes.	
f)	**Nature of Further Detailed Investigations and Potential Infrastructure Upgrades that may be Implemented to Address Confirmed Issues**
Infrastructure upgrades to the wastewater network will be led by Watercare Services Ltd, with Healthy Waters assisting where it can effectively contribute to improved outcomes. This includes a joint project to identify the optimal solution to reduce overflows to the receiving environment for public and environmental health reasons for the central combined sewer area (~~project CANOPy~~)(WIWQIP).	
g)	**Management Processes other than the Identification of Infrastructure Development and Upgrades**
The following management applies to all public stormwater infrastructure: ▪ Work with building control where wastewater infiltration and cross connections have been identified within areas that do not have combined sewers (Co). ▪ Increasing public awareness around the potential health risks associated with all flood waters, working with Watercare Services Ltd and Civil Defence on this matter (In, Co).	
h)	**Proposed six- year NDC targets**
Collaboration with stakeholders (all Co) a) Develop a strategy for investigation and management of identified issues relating to cross contamination. b) Collaborate with Watercare Services Ltd to identify the optimal solution to reduce overflows to the receiving environment for public and environmental health reasons for the central combined sewer area (WIWQIP). c) Regularly engage with Watercare Services Ltd and Building Control to identify and assess inflow and infiltration issues and collaboratively design and implement infrastructure upgrades.	

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Supporting Strategic Objectives, Outcomes and Targets for all Issues

a) **Strategic Objective - Collaborative Outcomes:**
Stakeholders are engaged to achieve the best stormwater outcomes including for te mauri or te wai for present and future generations.
Supporting Outcomes for Collaborative Outcomes ▪ Collaborate with Council departments and CCOs that have a key role in delivering positive stormwater outcomes. ▪ Build constructive, working relationships with key stakeholders to achieve integrated stormwater solutions and cost effective outcomes. ▪ Establish effective mechanisms for mana whenua to be appropriately engaged in stormwater management. This includes recognising and actively working to operationalise and integrate the relationship and cultural values mana whenua have with their waterways. ▪ Work with the stormwater industry to continue to identify, refine and communicate best practice and increase industry capacity, resources and knowledge. **Six-year Targets** In addition to the collaboration targets listed in Tables 9-1 to 9-7 above: a) Proportion of mana whenua that are satisfied with Auckland Council's engagement with iwi in relation to stormwater projects: 10/19 or more (LTP). b) Percentage of projects that contribute to Maori outcomes: at least 95% (AMP). c) >$100,000 of other Council departments or CCOs growth projects are supported by the HW capital investment each year (AMP). *Actions for Collaborative Outcomes* d) Take into account and be cognisant of current or future Iwi Management Plans (DC). e) Develop and integrate, in partnership with mana whenua, best practice tools which can be used to effectively measure and assess cultural impacts of stormwater operations and programmes as part of the project scoping, prioritisation and cost-benefit analysis process (Mauri-model) - model developed, ongoing implementation for all significant projects (Co). f) Establish a draft process to operationalise and integrate the relationship and cultural values mana whenua have with their waterways. This includes annual reporting on mana whenua engagement efficacy in order to determine when engagement took place in a project, what the value of the input was, and how mana whenua feedback was (or was not) incorporated (Co). g) Regular engagement with iwi to assess implementation via the mana whenua hui (Co).
b) Strategic Objective - Prioritised Investment:
Benefits from limited resources are maximised by targeting our priorities to achieve the best outcomes we can afford.
Supporting Outcomes for Prioritised Investment ▪ Undertake regional prioritisation that targets investment in the right areas, as agreed within Council, with mana whenua and our community and in accordance with the Auckland Plan vision and statutory requirements. ▪ Establish levels of service that are relevant and affordable. **Six Year Targets and Actions for Prioritised Investment** a) As for Collaborative Outcomes above.
c) Strategic Objective - Efficient Business:
Robust systems, processes, practices and management are implemented to support delivery of stormwater services.
Supporting Outcomes for Efficient Business ▪ Undertake efficient and effective network operational, renewals and maintenance programmes. ▪ Regionalise stormwater management through harmonisation of standards, contracts and business processes. ▪ Provide fit for purpose information systems and business tools. ▪ Undertake efficient and effective response to customers and incidents. ▪ Rationalise network consents and compliance requirements. ▪ Monitor and report performance. **Six-year Target** a) Compliance with NDC – number of abatement notices, infringement notices, enforcement orders or successful prosecutions: 0 (zero) (AMP).

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Schedule 4: Requirements for changes to be authorised under the Auckland Stormwater Network Discharge Consent

Council renewal, maintenance and upgrade works[2]			
1. No new/additional habitable floor affected by flooding in 1% AEP event and no increase in frequency of existing flooding 2. No significant increase in risk to the operation and structural integrity of other infrastructure in 1% AEP event 3. No increase in inundation that affects a building on property in 10% AEP 4. No loss in overland flow path capacity, unless provided by other means 5. All major capital works projects consider, and where appropriate implement, a green infrastructure option in accordance with the Healthy Waters Green Infrastructure Policy 6. Significant erosion at a (pubic stormwater) outfall, which is the result of the operation of that outfall, is remedied/stabilised 7. Appropriate erosion protection/mitigation is provided for any new outfall in accordance with the Stormwater Code of Practice 8. Where stormwater is directed to a different receiving environment then the change in discharge: - Does not decrease water quality in the receiving environment;-or - Is not predicted, by modelling or other suitable method, to result in increased stream erosion Where any of the above performance requirements cannot be achieved for a given project, alternative levels of performance are to be established in a Stormwater Management Plan that is certified by the Manager, Auckland Council Regulatory Services or delegate. The alternative may be certified if it meets the NDC Outcomes (Schedule 2), to the extent practicable applies an Integrated Stormwater Management Approach and is the best practicable option for the given project.			
Connection Requirements – Private Development			
Issue/Receiving Environment	**Brownfields small**	**Brownfields large – 20 lots or over new/re-developed 5,000m² impervious surface**	**Greenfield**
Catchments/areas			
Within area covered by adopted SMP[3] (Schedule 10)	▪ Stormwater management or connection requirements in accordance with the SMP Note that where specifically addressed in a SMP these requirements supersede any performance requirements below		
In other areas	Requirements below are met; or ▪ Where requirements cannot be met, a	A SMP detailing the Best Practicable Option[4] ~~having particular regard to~~that addresses: ▪ The management approach/ key elements including:	

[2] Note: These projects do not create impervious area, but rather affect how stormwater is conveyed and discharged. Development that creates impervious area is covered by the vesting/connection requirements for ~~brownfield~~Brownfield and ~~greenfield~~Greenfield development.

[3] Stormwater Management Plan. These include Integrated Catchment Management Plans or similar where they have been adopted under this consent.

[4] In developing a SMP, the primary objective is to achieve the best practicable option for the long term management of stormwater from the development area. In addition to the requirements to consider the Stormwater Code of Practice and WSD principles, consideration should also be given to site specific constraints and circumstances as outlined in Policy E1.3.10.

	SMP that includes supporting information that demonstrates the best practicable option has been adopted	- Areas of development, including roads and reserves - Location of vested infrastructure, including green infrastructure (note that assets located in the road corridor also require approval of Auckland Transport) - Areas of on-site and communal (public) stormwater management ~~- The protection of significant~~ Significant site features and hydrology - How the connection/vesting requirements below are met or the alternative that is proposed ▪ ~~How~~An assessment, which includes such detail as corresponds with the scale and significance of the effects of the proposal, of how an Integrated Stormwater Management ~~Approach has been adopted in the design and associated stormwater management~~ in accordance with the policies in the AUP[5] ~~Section~~Sections E1.3, B7 and B8 to: - Minimise the stormwater related ~~effects of development~~, - Retain/restore natural hydrology as far as practicable - Minimise the generation and discharge of contaminants (including gross Stormwater pollutants[6]) and stormwater flows at source - Minimise temperature related effects - Enhance freshwater systems including streams and riparian margins - Minimise the location of engineered structures in streams - Protect the values of Significant Ecological Areas as identified in the Auckland Unitary Plan ▪ Any stormwater plan prepared as part of a relevant structure plan
Water Quality (note: these apply in addition to any land use/consent requirements)		
Degraded or sensitive aquatic environment: ▪ Stream ▪ Coastal Degraded 1	▪ No more than 25 m² of any combination of exposed (i.e. unpainted) roofing, guttering or cladding, made of galvanised steel[7] or copper, unless	▪ Treatment of all impervious areas by a water quality device designed in accordance with GD01/TP 10 for the relevant contaminants Or

[5] Auckland Unitary Plan
[6] Pollutants such as litter, plastics and other coarse material that may become entrained in stormwater flows
[7] Steel with a surface coating of 99% zinc or greater

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or 2 ▪ Quality sensitive groundwater aquifer (see AUP)	treated by a water quality device designed in accordance with GD01/TP 10, for the treatment and attenuation of metals in the runoff ▪ Gross pollutant traps[8] for commercial and industrial waste storage, handling or loading/unloading areas treatment and communal waste storage areas for apartments and multi-unit developments	▪ An alternative level of mitigation determined through a SMP that: - applies an Integrated Stormwater Management Approach (as per above); - meets the NDC Objectives and Outcomes in Schedule 2; and - is the BPO. And ▪ Gross pollutant traps for runoff from: - Commercial/industrial waste storage/handling or loading/unloading areas treatment - Communal waste storage areas in apartments and multi-unit developments	
Other receiving environments	▪ Gross pollutant traps[9] for commercial and industrial waste storage, handling or loading/unloading areas treatment and communal waste storage areas for apartments and multi-unit developments		
Stream Hydrology			
Within a SMAF	▪ No additional requirements to those of the AUP		
Where discharge is to a stream via public stormwater network outside of SMAF	▪ No additional requirement to Maximum Impervious Area controls in the AUP	▪ Provide retention (volume reduction) of a minimum of 5mm runoff depth for all impervious areas; and ▪ Provide detention (temporary storage) with a draindown period of 24 hours for the difference between the pre-development (grassed state) and post-development runoff volumes from the 95th percentile, 24 hour rainfall event minus the retention volume for all impervious areas; except that Where:	▪ Achieve equivalent hydrology (infiltration, runoff volume, peak flow) to pre-development (grassed state) levels; Or ▪ An alternative level of mitigation determined through a SMP that: - applies an Integrated Stormwater Management Approach (as per above); - meets the NDC Objectives and Outcomes in Schedule 2;

[8] Auckland Council Publications GD01 and TR2011/006 provide guidance as to suitable devices for removing gross pollutants
[9] Auckland Council Publications GD01 and TR2011/006 provide guidance as to suitable devices for removing gross pollutants

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		(a) a suitably qualified person has confirmed that soil infiltration rates are less than 2mm/hr or there is no area on the site of sufficient size to accommodate all required infiltration that is free of geotechnical limitations (including slope, setback from infrastructure, building structures or boundaries and water table depth); and (b) rainwater reuse is not available because: - the quality of the stormwater runoff is not suitable for on-site reuse (i.e. for non-potable water supply, garden/crop irrigation or toilet flushing); or - there are no activities occurring on the site that can re-use the full 5mm retention volume of water the retention can be taken up by detention as follows: ▪ provide detention (temporary storage) and a drain down period of 24 hours for the difference between the pre-development and post-development runoff volumes from the 95th percentile (SMAF 1) / 90th percentile (SMAF 2), 24 hour rainfall event minus any retention volume that is achieved, over the impervious area for which hydrology mitigation is required. Or ▪ An alternative level of mitigation determined through a SMP that:	- is the BPO for the given project A method of achieving equivalent hydrology to pre-development (grassed state) levels is to: ▪ Provide retention (volume reduction) of a minimum of 5mm runoff depth for all impervious areas; and ▪ Provide detention (temporary storage) with a draindown period of 24 hours for the difference between the pre-development (grassed state) and post-development runoff volumes from the 95th percentile, 24 hour rainfall event minus the retention volume for all impervious areas

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		- applies an Integrated Stormwater Management Approach (as per above); - meets the NDC Objectives and Outcomes in Schedule 2; - is the BPO for the given project	
Flooding			
Property/pipe capacity: 10% AEP event	▪ Ensure that there is sufficient capacity within the pipe network to the first manhole downstream of the connection point to cater for the additional stormwater runoff associated with the development in a 10% AEP event. Methods of achieving this include: ▪ Demonstrating sufficient capacity is available including flows from the catchment (at maximum probable development) draining to the relevant section of pipe network in the 10% AEP event; ▪ Attenuating and reducing stormwater flows and volume on-site such that there is no increase in peak flow in a 10% AEP event from the site compared to that prior to the new development. Note that any vested devices, or devices to be managed by a body corporate associated with this option will also require an operation and maintenance plan to ensure the long-term efficacy of such a system.	▪ Ensure that there is sufficient capacity within the pipe network downstream of the connection point to cater for the additional stormwater runoff associated with the development in a 10% AEP event; or ▪ Demonstrate that flows in excess of the pipe capacity in a 10% AEP event within the pipe network downstream of the connection point will not increase flooding of any other property; or ▪ Demonstrate through an assessment that flows in excess of the pipe capacity in a 10% AEP event within the pipe network downstream of the connection point will not increase adverse effects on any other property. Factors to consider when evaluating adverse effects as a result of flooding should include, but are not limited to: ▪ The type, frequency and scale of increased flooding or overland flow; ▪ The type of activities being undertaken	▪ Ensure that there is sufficient capacity within the pipe network downstream of the connection point to cater for the stormwater runoff associated with the development in a 10% AEP event including incorporating flows from contributing catchments at maximum probable development. Methods of ensuring sufficient capacity in the downstream pipe network include any one of the following: ▪ Demonstrating sufficient capacity is available including flows from the catchment (at maximum probable development) draining to the relevant pipe network in the 10% AEP event); ▪ Attenuating and reducing stormwater flows and volume on-site such that there is no increase in peak flow in a 10% AEP event from the site compared to that prior to the new development. Note that any devices associated with this option will also require an operation and maintenance plan to ensure the long-term efficacy

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	Advice note: The following option also applies as an alternative to the above: *Providing a financial contribution in agreement with Healthy Waters to upgrade the relevant pipe network where these is significant potential for additional development in the contributing catchment.*	within the property and the consequences of increased flooding or overland flow in relation to these activities and the people involved; and, ▪ The potential impact on public safety, including safe access and ingress. Methods of ensuring sufficient capacity in the pipe network in ~~brownfield~~Brownfield areas include any one of the following: ▪ Demonstrating sufficient capacity is available including flows from the catchment (at maximum probable development) draining to the relevant pipe network in the 10% AEP event); ▪ Attenuating and reducing stormwater flows and volume on-site such that there is no increase in peak flow in a 10% AEP event from the site compared to that prior to the new development. Note that any devices associated with this option will also require an operation and maintenance plan to ensure the long-term efficacy of such a system. ▪ Upgrading the relevant pipe network to a size that can cater for the additional flows from the development in the 10% AEP event (~~incorporating~~taking into account flows from the contributing catchment~~ at maximum probable development~~); or ▪ ~~In agreement with Healthy Waters, contributing to the upgrade of~~Upgrading the relevant pipe network ~~where there~~to	of such a system; ▪ Upgrading the relevant pipe network to a size that can cater for the additional flows from the development in the 10% AEP event (~~incorporating~~taking into account existing flows from the contributing catchment~~ at maximum probably development~~); or ▪ ~~In agreement with Healthy Waters, contributing to the upgrade of~~Upgrading the relevant pipe network ~~where there~~to a size that is ~~significant potential~~larger than would otherwise be required to cater for ~~additional~~ the 10% AEP event for the development~~ in~~, due to the need to cater for flows from the contributing catchment~~.~~ at maximum probable development, subject to a fair and proportionate funding agreement with Healthy Waters.

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		a size that is ~~significant potential~~larger than would otherwise be required to cater for ~~additional~~ the 10% AEP event for the development ~~in~~, due to the need to cater for flows from the contributing catchment~~.~~ ▪ at maximum probable development, subject to a fair and proportionate funding agreement with Healthy Waters.	
Buildings – 1% AEP event	No additional requirement to Maximum Impervious Area controls in AUP	▪ Manage/mitigate 1% AEP peak flow to that immediately preceding development/redevelopment Or ▪ An alternative level of mitigation determined through a SMP that: - applies an Integrated Stormwater Management Approach (as per above); - meets the NDC Objectives and Outcomes in Schedule 2; - is the BPO for the given project	▪ Develop to Stormwater Code of Practice ▪ Develop in accordance with SMP as above
Assets			
General	*All new assets that are intended to ~~be vested~~become part of the Public Stormwater Network are to be designed and constructed to be durable and perform to the required level of service for the life of the asset, subject to reasonable asset maintenance.* *Note: The vesting of new stormwater assets in Council ~~are to be built in accordance with~~is subject to any required approvals including under the Stormwater Bylaw, and the Stormwater Code of Practice.* Stormwater management assets In the road corridor require approval from Auckland Transport prior to vesting		

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Connection Requirements[10] – AT/NZTA/Railways Transport Projects[11]				
Issue/Receiving Environment	**Small projects – up to 1,000 m^2 of new impervious area**	**Off-road pedestrian and cycling facilities and ferry terminal facilities. New impervious area greater than 1,000m^2**	**Development of new / redevelopment of impervious area for:** - **existing high use roads[12] - that includes new impervious area greater than 1,000m^2** - **other roads that includes new impervious area greater than 5,000m^2** - **rail corridor projects with new impervious area greater than 1,000m^2**	**Development/redevelopment of a high contaminant generating carpark[13] (new/redeveloped area greater than 1,000m^2)**
Catchments/areas				
Within area covered by an adopted SMP (Schedule 10)	▪ Stormwater management or connection requirements in accordance with the SMP Note that where specifically addressed in a SMP these requirements supersede any performance requirements below			
In other areas	▪ General performance requirements - No new/additional habitable floor affected by flooding in 1% AEP event and no increase in frequency of existing flooding - No significant increase in risk to the operation and structural integrity of other infrastructure in 1% AEP event - No increase in inundation that affects a building on a property in 10% AEP - No loss in overland flow path capacity, unless provided by other means Where these requirements cannot be met, a SMP that includes supporting information to justify an alternative as the BPO for the given project is required.			
Water Quality (note: these apply in addition to general performance requirements above) Where the existing road corridor is constrained off-setting within the same catchment may form part of the mitigation approach.				
All receiving environments	No requirements	▪ Treatment of new road area and any existing road area directed to same point by a water quality device designed in accordance with GD01/TP	▪ Treatment of new/redeveloped area (or all carpark area where it is >50% of the site) by a water quality device designed in accordance with GD01/TP 10 for the	

[10] These requirements only apply where there is a connection into the public stormwater network

[11] Note that roads constructed by a developer as part of ~~greenfield/brownfield~~Greenfield/Brownfield development are considered as part of that development

[12] See AUP definition: A road, motorway or state highway that carries more than 5000 vehicles per day, excluding cycle lanes, footpaths and ancillary areas that do not receive stormwater runoff from the road carriageway

[13] See AUP Definition: Carpark that is exposed to rainfall and is designed for a total of more than 30 vehicles

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		10 for the relevant contaminants Or ▪ Treatment of equivalent area of high use road within same catchment by a water quality device designed in accordance with GD01/TP 10 for the relevant contaminants Or ▪ An alternative level of mitigation determined through a SMP that: - applies an Integrated Stormwater Management Approach (as per above); - meets the NDC Objectives and Outcomes in Schedule 2; - is the BPO for the given project	relevant contaminants Or ▪ Treatment of equivalent area within same catchment by a water quality device designed in accordance with GD01/TP 10 for the relevant contaminants Or ▪ An alternative level of mitigation determined through a SMP that: - applies an Integrated Stormwater Management Approach (as per above); - meets the NDC Objectives and Outcomes in Schedule 2; - is the BPO for the given project
Stream Hydrology Where the existing road corridor is constrained off-setting within the same catchment may form a part of the mitigation approach.			
With a SMAF	No additional requirements to those of AUP and general requirements above		
Where discharge is to a stream via public stormwater network outside of SMAF	No additional requirements to those of AUP and general requirements above		
Flooding			
Property/pipe capacity: 10% AEP event	**Projects – up to 5,000 m² new impervious area**[14] ▪ Ensure that there is sufficient capacity within the pipe network to the first manhole downstream of the connection point (at maximum probable development of the contributing catchment) to cater for the additional stormwater runoff associated with the new impervious area in a 10% AEP event; or ▪ Attenuate stormwater flows and volume such that there is no increase in peak flow in a 10% AEP event from the total road impervious area draining to the pipe network to the first manhole downstream of the connection point to that prior to the new impervious area. **Projects – 5,000 m² or more of new impervious area**[15]		

[14] It is anticipated that capacity and other issues will be assessed in conjunction with Healthy Waters

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	▪ Ensure that there is sufficient capacity within the pipe network downstream of the connection point (at maximum probable development of the contributing catchment) to cater for the additional stormwater runoff associated with the new impervious area in a 10% AEP event; or ▪ Attenuate stormwater flows and volume such that there is no increase in peak flow in a 10% AEP event from the total road impervious area draining to the pipe network downstream of the connection point to that prior to the new impervious area; or ▪ Demonstrate that flows in excess of the pipe capacity in a 10% AEP event downstream of the connection point will not increase flooding of any other property and will not create a nuisance or hazard.
Buildings – 1% AEP event	Addressed in general performance requirements above.
Assets	
General	All new stormwater assets to be operated by Healthy Waters are to be built in accordance with the Stormwater Code of Practice

[15] It is anticipated that capacity and other issues will be assessed in conjunction with Healthy Waters

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Schedule 5: Approval/Compliance/Certification Processes

Activity	Assessment mechanisms	Approvals	
		Stormwater Network Utility Operator [16]	Regulatory Manager Certification[17]
New or changes to stormwater diversion and discharges resulting from the development, renewal, maintenance or improvement of the public stormwater network infrastructure owned and operated by Auckland Council			
Renewal, upgrade and/or new stormwater infrastructure works that change the flow, volume, or location of discharge and which meet Schedule 4 Performance Requirements	Assessment of Changes to Catchment Discharge (ACCD)	N/A	ACCD available for audit as part of compliance review.
Renewal, upgrade and/or new stormwater infrastructure works that change the flow, volume, or location of discharge that do not meet Schedule 4 Performance Requirements but effects can be fully mitigated through other measures	ACCD/SMP	Confirmation that ACCD/SMP is consistent with Schedule 2, 3 and 4	Certification that ACCD/SMP is consistent with Schedule 2 and 3 and the project is the Best Practicable Option for the given project
Renewal, upgrade and/or new stormwater infrastructure works that change the flow, volume, or location of discharge that do not meet Schedule 4 Performance Requirements and effects cannot be fully mitigated	ACCD/SMP	Assessment that ACCD/SMP is consistent with Schedule 2 and 3 and project is the Best Practicable Option for the given project The operator shall consult with any party that is potentially adversely affected. The outcome of any such consultation shall form part of the information put forward for certification of the SMP	Certification that ACCD/SMP is consistent with Schedule 2 and 3 and the project is the Best Practicable Option for the given project

[16] Includes Council teams delegated by the stormwater network utility operator to assess compliance.
[17] Manager, Auckland Council Regulatory Services or as delegated

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Activity	Assessment mechanisms	Approvals	
		Stormwater Network Utility Operator [16]	Regulatory Manager Certification[17]
Changes to or new discharges and diversions resulting from land development where stormwater assets connect to, and/or are subsequently vested and become part of, the public stormwater network infrastructure owned and operated by Auckland Council			
New connections/vested infrastructure that meet Schedule 4 Vesting/Connection Requirements	Compliance with Schedule 4 Vesting/Connection Requirements Consultation with Auckland Transport where stormwater management devices are proposed within the existing road reserve or road reserve to be vested.	New/altered connections - SW Bylaw approval Vested assets and associated connections – SW CoP and Bylaw approval[18]	Approvals available for audit as part of compliance review

[18] Where possible, the ~~consent holder~~Consent Holder will integrate approvals under the SMP and the Stormwater Code of Practice/Bylaw. It is recognised that these approvals are often at different levels of detail, such that this is not always possible. Note that any stormwater management devices located in the road corridor also require the approval of Auckland Transport.

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Activity	Assessment mechanisms	Approvals	
		Stormwater Network Utility Operator [16]	Regulatory Manager Certification[17]
Greenfield development, major redevelopment, or where Schedule 4 Vesting/Connection Requirements cannot be met	SMP Consultation with Auckland Transport where stormwater management devices are proposed within existing road reserve or road reserve to be vested. In preparing the SMP, consultation shall be undertaken with any party that is potentially adversely affected by the SMP. The outcome of any such consultation, including the views of any affected party, shall form part of the information put forward for certification of the SMP.	Adoption of SMP that is consistent with Schedule 2, 3 and 4 and is the Best Practicable Option[15] *Note: If there is already an approved existing SMP prepared after 1 January 2013, this requirement does not apply in accordance with Condition 19.*	SMP available for audit as part of compliance review

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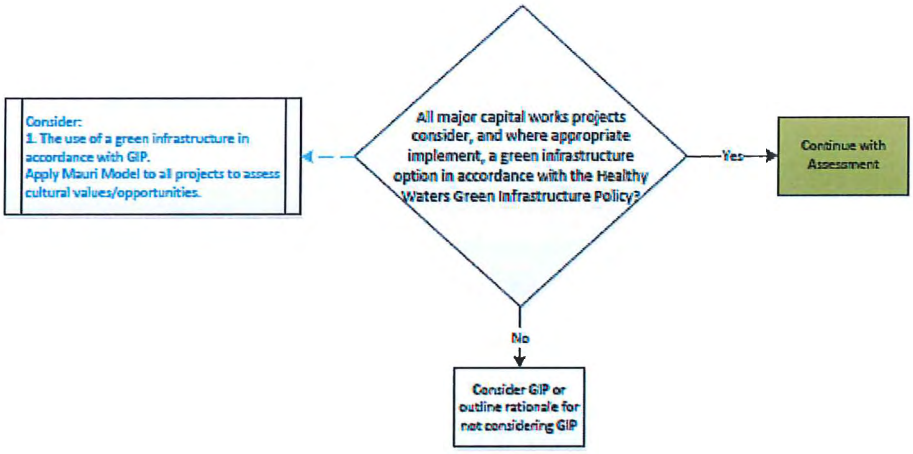
Assessment of Changes to Catchment Discharges
Green Infrastructure



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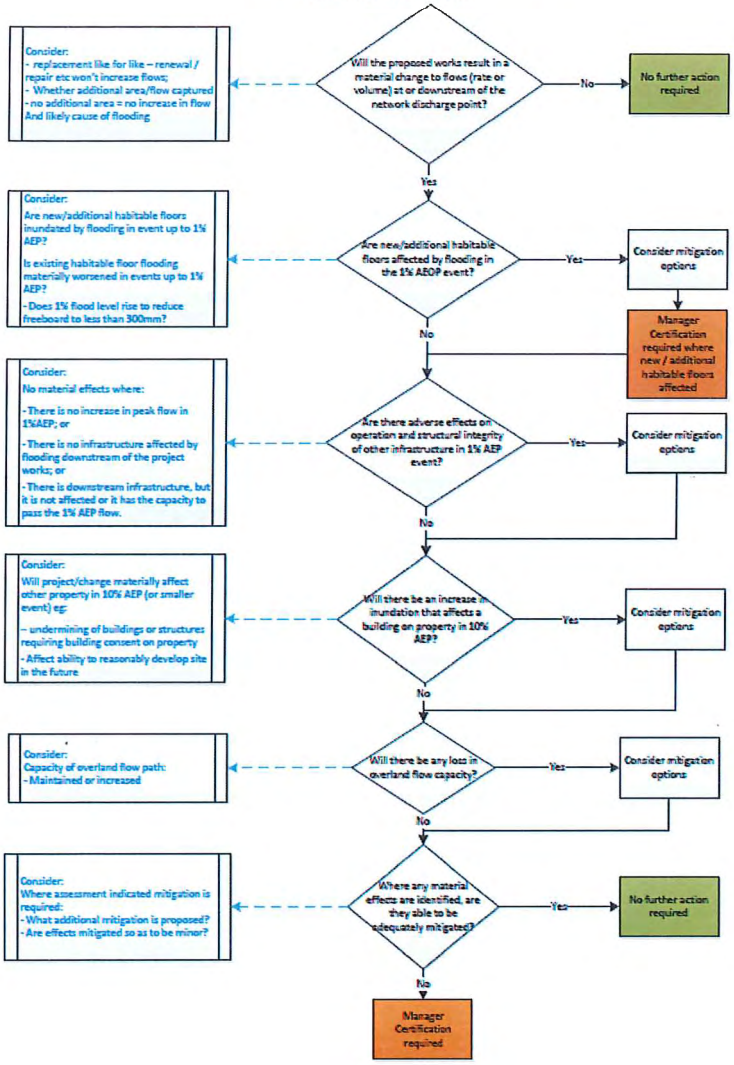
Assessment of Changes to Catchment Discharges
Flooding Assessment



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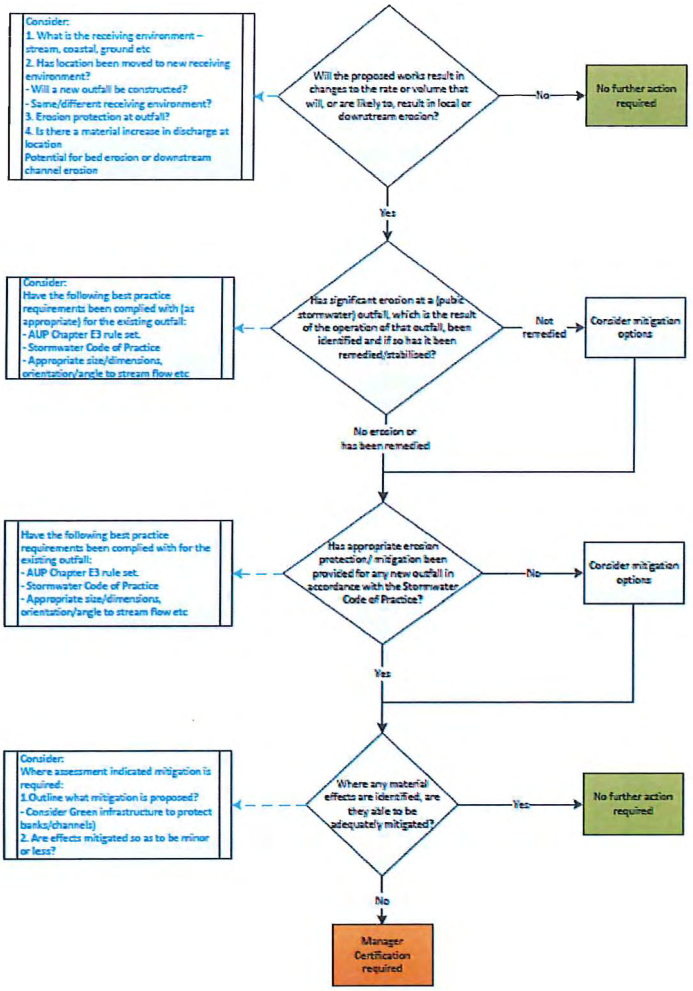
Assessment of Changes to Catchment Discharges
Erosion Assessment



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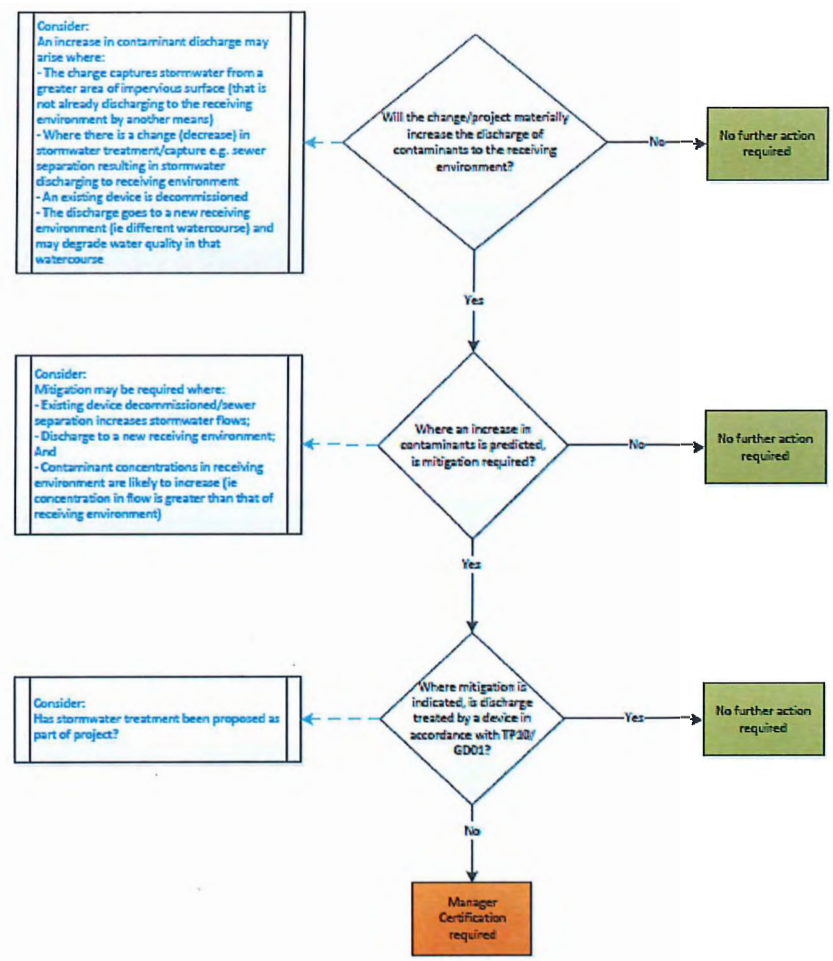
Assessment of Changes to Catchment Discharges
Water Quality



Schedule 6: Monitoring Framework

This schedule outlines monitoring that is undertaken by Council that will be used to inform performance and progress against NDC Outcomes and Milestones. The majority of the monitoring programmes are reported regularly through State of the Environment, LTP or other reporting. Monitoring relevant to the Auckland-wide Stormwater NDC will be collated and reported in accordance with the requirements and frequencies specified in the conditions of consent.

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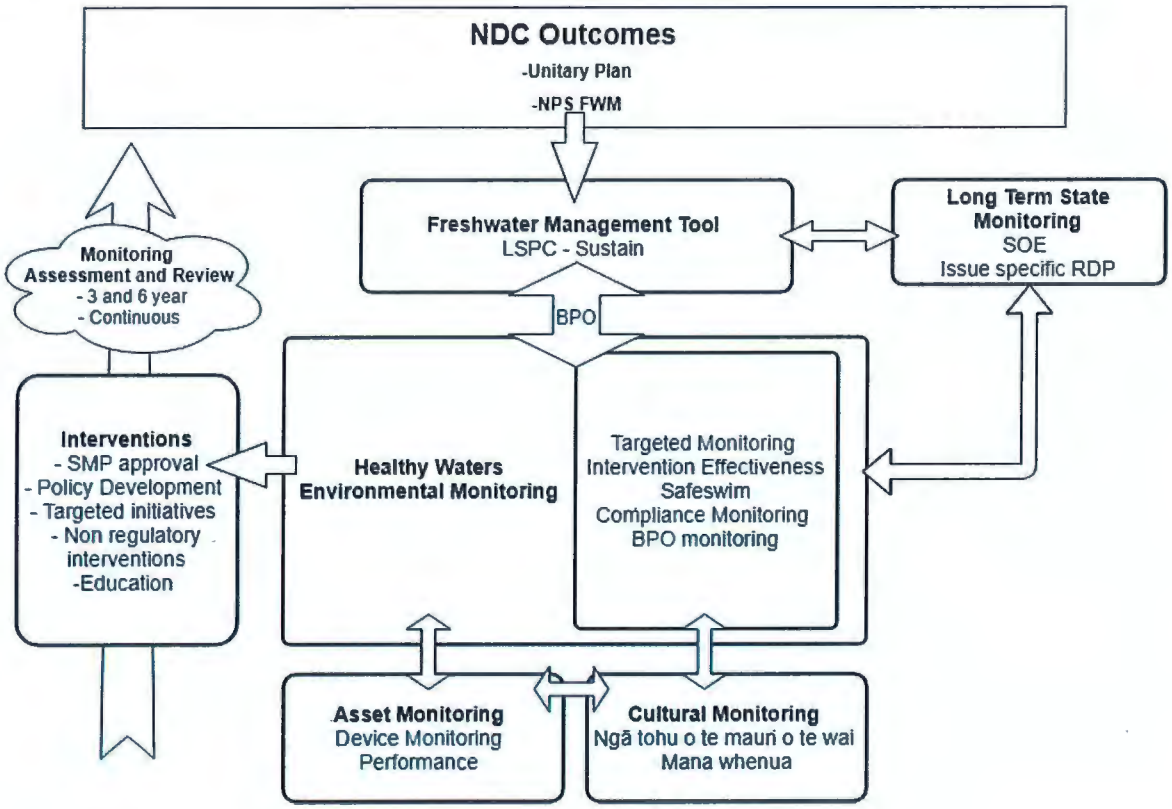
Monitoring process



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Schedule 7: ~~Conditions of Consent~~ Public Stormwater Network Management Obligations Retained from Existing Consents

7.1 Dawson Road / Kia Kaha Drive / Goodall Road Wetland

The Consent Holder will manage the diversion and discharge of stormwater within catchment E of the Mahurangi East Catchment in accordance with "Map 2-10B: Mahurangi East Stormwater" of the Mahurangi East ICMP Update (January 2014) and the conditions of this consent. The wetland to be created pursuant to BUN60323877 complies with Map 2-10B, the relevant ICMP and is included within the scope of this consent.

The Consent Holder cannot amend or remove this Management Obligation from this Schedule other than through a change to the conditions of this consent in accordance with s127 or s128 of the RMA.

Map 2-10B: Mahurangi East Stormwater

[will be populated as consents are surrendered]

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Schedule 8: Process for Adopting a Stormwater Management Plan (to authorise new diversion/discharges as part of the NDC)

1. A person (Requestor) wishing to have an ~~SMP~~Stormwater Management Plan adopted must provide a Proposed ~~SMP~~Stormwater Management Plan to the ~~[~~Consent Holder~]~~ containing the information set out Schedule 4, and the written consent of any third party ~~whose land is directly affected by the proposed SMP~~referred to in ~~accordance with~~ Condition ~~14 (a) or (b);~~13c;

2. If the Proposed ~~SMP~~Stormwater Management Plan meets the requirements of Schedule 2 and 4 the Consent Holder must:

   (a) adopt it in accordance with Schedule 5;

   (b) provide notice of the ~~–~~adopted ~~SMP~~Stormwater Management Plan to the ~~[~~Manager~]~~;;

   (c) record the adopted ~~SMP~~Stormwater Management Plan on a publicly accessible register; and

   (d) update a GIS layer of adopted ~~SMPs~~Stormwater Management Plans that includes the extent and terms of the ~~SMP.~~Stormwater Management Plan.

3. If, in the opinion of the Consent Holder the Proposed ~~SMP~~Stormwater Management Plan does not meet the requirements of Schedule 2 and 4 the Consent Holder must:

   (a) Provide to the Requestor:

      (i) a summary of what aspects of the Proposed ~~SMP~~Stormwater Management Plan are not, in the consent's holder's opinion, in accordance of Schedule 2 and 4;

      (ii) the changes to the Proposed ~~SMP~~Stormwater Management Plan that would, in the Consent Holder's opinion, be required to ensure that it would be in accordance with Schedule 2 and 4;

      (iii) notice that the Proposed ~~SMP~~Stormwater Management Plan will be provided to the ~~[~~Manager~]~~ under clause ~~[~~3(b)~]~~ below; and

      (iv) a timeframe (no less than 10 working days) for the Requestor to provide a written response to clauses (a)(i) and (ii) above.

   (b) Provide to the Manager (copied to the Requestor) within 5 working days of the time stated in (a)(iv) above:

      (i) the Proposed ~~SMP~~Stormwater Management Plan;

      (ii) the information provided to the Requestor under clause (a)(i) and (ii) above;

      (iii) any response provided by the Requestor in accordance with clause (a)(iv) above; and

      (iv) a request for the Manager to certify whether the Proposed ~~SMP~~Stormwater Management Plan is in accordance with the objectives and outcomes of Schedule 2 and is the BPO for the proposal.

4. Upon receiving the information listed in 3(b) above, the Manager will:

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(i) provide the material required under Item 3(b)(i) to 3(b)(iii) to the TRG and request comment from the TRG on whether the Proposed ~~SMP~~Stormwater Management Plan, and in particular any matters in dispute, is in accordance with the objectives and outcomes of Schedule 2 and is the BPO for the proposal. The Manager shall nominate a timeframe for the TRG to provide its response.

(ii) In writing with reasons, certify or decline to certify the ~~SMP~~Stormwater Management Plan when considered against the requirements of Item 3(b)(iv) above.

To certify the ~~SMP~~Stormwater Management Plan the Manager must be satisfied that the final extent and terms of the ~~SMP~~Stormwater Management Plan is in accordance with the objectives and outcomes of Schedule 2 and is the BPO for that proposal.

5. The decision of the Manager is binding on the Consent Holder; and the extent and terms of the ~~SMP~~Stormwater Management Plan determined by the Manager is deemed to be an adopted ~~SMP~~Stormwater Management Plan for the purposes of ~~Condition~~clause 2, unless in the opinion of the Consent Holder the proposed ~~SMP~~Stormwater Management Plan places obligations on the Consent Holder which it cannot reasonably fulfil.

6. Costs relating to the Manager's functions must be paid by the Consent Holder. Costs incurred by the Consent Holder and Requestor relating to clauses 2-4 lie where they fall.

7. If at any time through this process agreement is reached between the Consent Holder and the requestor, then clause 2 applies and no additional action is required.

Advice Notes:

It is expected that there will be a significant level of engagement throughout the ~~SMP~~Stormwater Management Plan Acceptance process, including the process under Item 3 of this schedule.

Nothing in this schedule prevents a requestor at any stage seeking a resource consent for the diversion and discharge of stormwater. If the Manager deems the proposal is not in accordance with Schedule 2 or is not the BPO, the requestor can apply for a resource consent.

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Schedule 9: Definition of Terms Used in the NDC Conditions

~~*Public Stormwater Network*~~

~~The stormwater network owned by Auckland Council and operated by Healthy Waters on behalf of Auckland Council including that which is currently existing and the future network as constructed by, or on behalf of, Healthy Waters or which is constructed by other parties and vested in Auckland Council~~

~~The *Public Stormwater Network* does not include stormwater networks owned and operated by other public agencies for managing stormwater associated with their activities, nor stormwater network that is owned by a private entity.~~

Assessment of Changes to Catchment Discharges (ACCD)

An internal process adopted by Healthy Waters to ensure compliance with the NDC conditions, including the performance requirements for Council renewal, maintenance and upgrade works in Schedule 4. The ACCD assesses *Capital Works Projects* to confirm that any change in stormwater diversion and discharge is within the scope of that authorised by the NDC.

Brownfield

Any already urbanized land to be redeveloped, often for more intensive or different land use.

~~*Existing Stormwater Consents*~~

~~Operative stormwater diversion and discharge consents that are held by Healthy Waters and which will (subject to assessment) be superseded by the NDC and subsequently surrendered.~~

~~*Existing Stormwater Consents* do not include resource consents held by Healthy Waters for activities other than stormwater diversion and discharge, for example resource consents for outfall structures etc.~~

Capital Works Projects

A stormwater infrastructure project that is undertaken by Healthy Waters.

~~*Certified Hearings Commissioner*~~

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~~A person who is certified as a hearing commissioner under the Making Good Decisions Programme or such other accreditation as approved by the Minister for the Environment pursuant to section 39A of the RMA.~~

Certified Hearings Chairperson

A *Certified Hearing Commissioner* who is also certified as a Panel Chairperson under the Making Good Decisions Programme. For the purposes of the NDC, it is anticipated that a *Certified Hearings Chairperson* would have relevant planning and stormwater management experience and adjudicate on any dispute in an independent and impartial manner, consistent with the expectations for a *Certified Hearings Commissioner*.

Certified Hearings Commissioner

A person who is certified as a hearing commissioner under the Making Good Decisions Programme or such other accreditation as approved by the Minister for the Environment pursuant to section 39A of the RMA.

Existing Stormwater Consents

Operative stormwater diversion and discharge consents that are held by Healthy Waters and which will (subject to assessment) be superseded by the NDC and subsequently surrendered.

Existing Stormwater Consents do not include resource consents held by Healthy Waters for activities other than stormwater diversion and discharge, for example resource consents for outfall structures etc.

~~*The Manager*~~

Greenfield

Land identified for future urban development that has not been previously developed.

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NPSFM

The National Policy Statement for Freshwater Management, 2014 (updated 2017) and any subsequent revisions.

Public Stormwater Network

The ~~manager of~~stormwater network owned by Auckland Council and operated by Healthy Waters on behalf of Auckland Council including that which is currently existing and the future network as constructed by, or on behalf of, Healthy Waters or which is constructed by other parties and vested in Auckland Council.

The *Public Stormwater Network* does not include stormwater networks owned and operated by other public agencies for managing stormwater associated with their activities, nor stormwater network that is owned by a private entity.

~~Council's Resource Consents Department~~*The Manager*

The Manager, Auckland Council Regulatory Services or the equivalent position, or his /her appointed nominee.

Urban Area

Land zoned residential or business, together with adjoining special purpose and open space zones.

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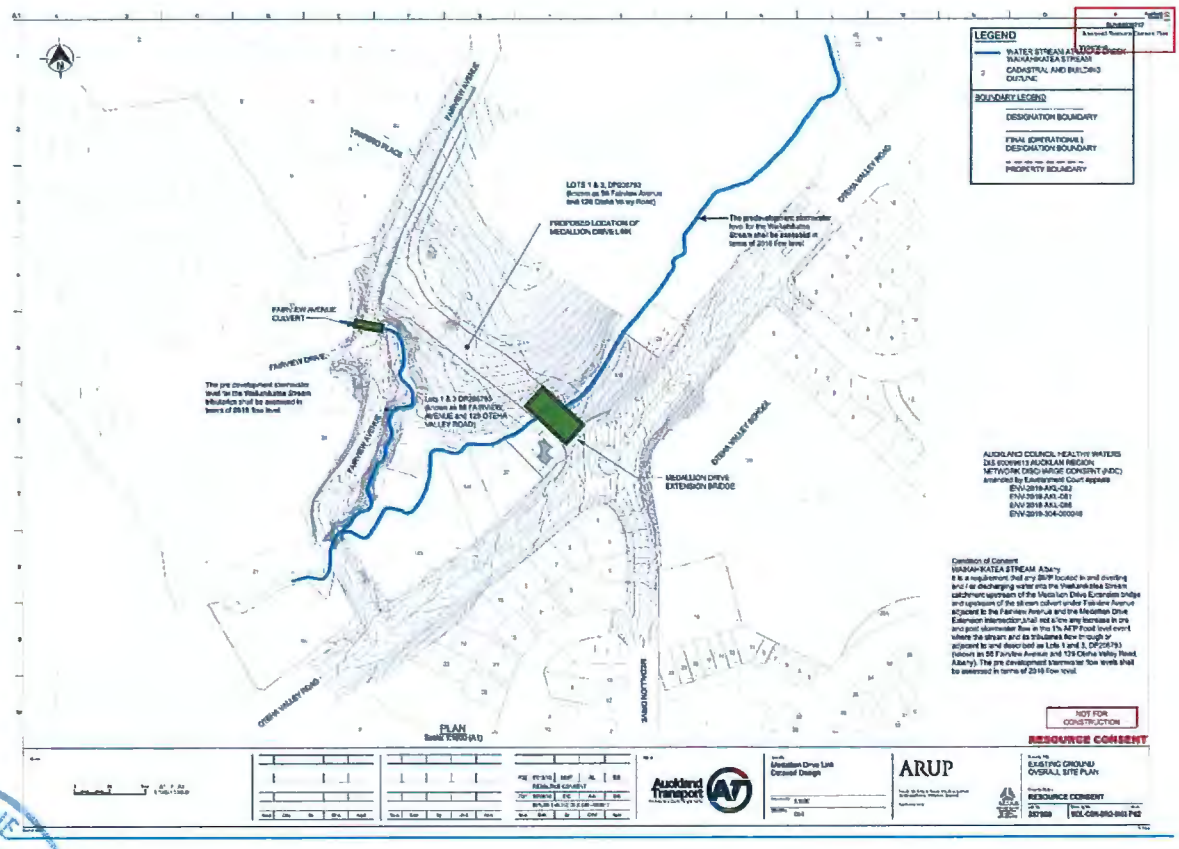
Schedule 10: Adopted or transferred stormwater management plans

10.1 Waikahikatea Stream, Albany: - Stormwater Management Plan in relation to 1% AEP flooding only (all other aspects of Schedule 4 apply).

It is a requirement that any ~~SMP~~Stormwater Management Plan located in and diverting and / or discharging water into the ~~Waiahiketea~~Waikahikatea stream catchment upstream of the Medallion Drive Extension bridge and upstream of the stream culvert under Fairview ~~Ave bridge~~Avenue adjacent to the Fairview Avenue and the Medallion Drive Extension intersection, shall not allow any increase in pre and post stormwater flow in the 1% AEP flood level event where the stream and its tributaries flow through or adjacent to land described as Lots 1 and 3 DP 208793 (known as 56 Fairview Avenue and 129 Oteha Valley Road, Albany). The pre development stormwater flow levels shall be assessed in terms of 2016 flow level.

The Consent Holder cannot amend or remove this Stormwater Management Plan from this Schedule other than through a change to the conditions of this consent in accordance with s127 or s128 of the RMA.

Map 10.1.1: Map of Lots 1 and 3 DP 208793 showing the location of the Medallion Drive Extension bridge, and the culvert under Fairview Avenue.



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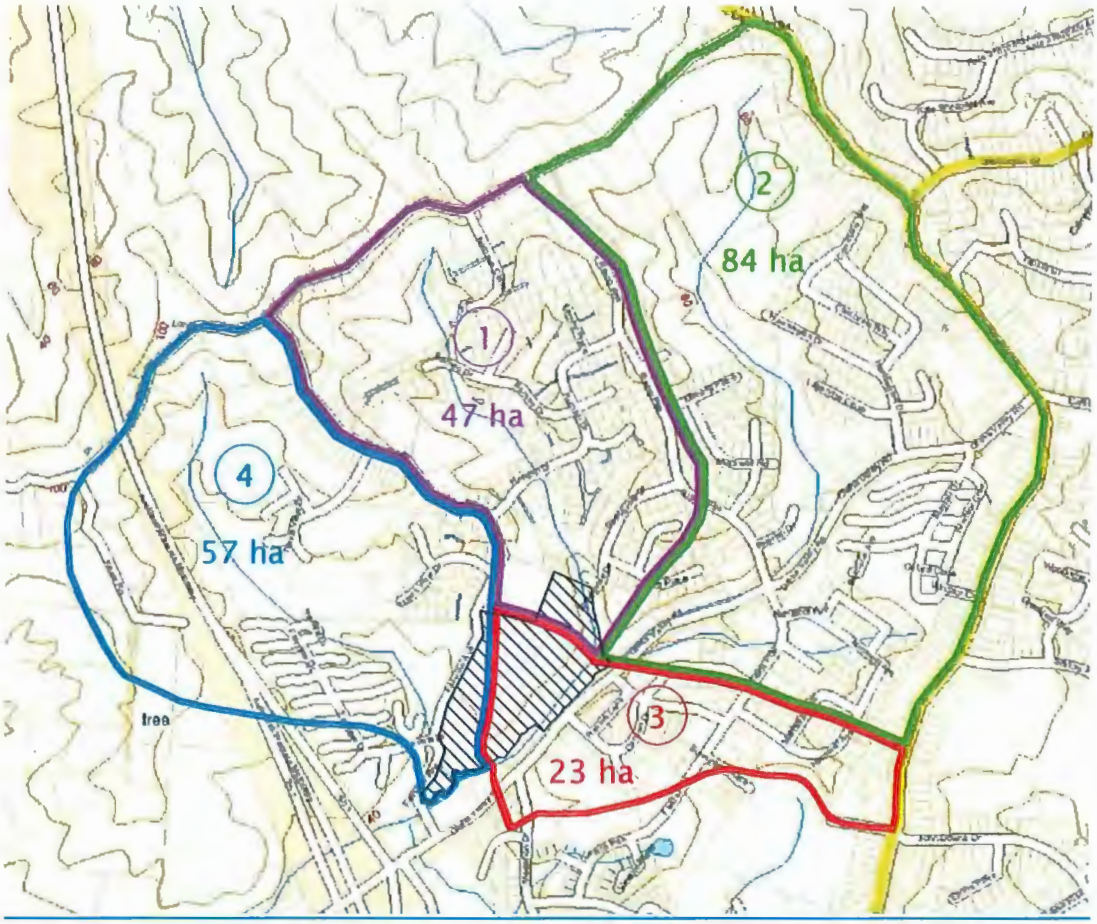
Map 10.1.2: Map showing the catchments upstream of the Medallion Drive Extension bridge to which 10.1 applies.



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