

Technical memorandum for an application for subdivision consent under the Resource Management Act 1991 in respect of 42 Okura Road, Elsthorpe

To: Ryan O'Leary, Planning Manager, The Property Group

From: Wayne Hodson, Senior Design Engineer (Three Waters), Stantec

1. Application details

Applicant's name: SR & BJ Williams Charitable Trust Board (**Applicant**)

Application number: RM230016

Activity type: Eleven lot fee simple rural subdivision (8 Rural Lifestyle Lots)

Site address: 42 Okura Road, Elsthorpe, legally described as Lot 2 DP 481291 (RT 674477) (**Property**)

2. Introduction

Qualifications and relevant experience

- 2.1. My name is Wayne Hodson, and I am a Senior Design Engineer for Stantec Consulting Ltd, based in Burnaby, British Columbia, Canada since June 2023. Prior to that I was employed by Stantec as a Senior Principal Civil Engineer, based in Hastings since 2007.
- 2.2. I hold a Bachelor of Engineering from the University of Canterbury.
- 2.3. I am a Chartered Professional Engineer (CPEng), with 28 years' experience in civil engineering with a large proportion of this experience in the three waters engineering area i.e., water, wastewater and stormwater. My experience includes subdivision and land development engineering from concept designs through to construction. I have provided internal and external peer reviews for engineering designs for various clients throughout New Zealand for more than 10 years.

2.4. Within the Central Hawke's Bay district, I have carried out technical reviews of infrastructure designs and provided advice and reviews to council on numerous land development and subdivision projects.

3. Overview and scope of technical memorandum

3.1. The Applicant has applied for a resource consent to subdivide the Property into:

- a. 8 rural lifestyle lots;
- b. 2 balance lots (Lots 11 and 12); and
- c. A separate lot (Lot 13) to be amalgamated with 38 Okura Road (legally described as Lot 1 DP 25627).

3.2. My technical memorandum assesses the three waters considerations of the Application to assist the preparation of the Central Hawkes Bay District Council's (**Council**) reporting planner's report under s 42A of the RMA and will cover the following matters:

- a. Stormwater effects and infrastructure
- b. Wastewater servicing
- c. Water supply servicing

3.3. In preparing this technical memorandum, I have reviewed the following documents relevant to the Application:

- a. Applicant's resource consent application (**Application**), and in particular:
 - i. Subdivision Consent Application and Assessment of Effects on the Environment, Mitchell Daysh (**AEE**).
 - ii. Appendix A1 - Scheme Plan 4698-30, Surveying the Bay (**Scheme Plan**)
 - iii. Appendix A2 - Staging Plan 4698-31 (6 sheets), Surveying the Bay (**Staging Plan**)
 - iv. Appendix E – Geotechnical Assessment Report, RDCL (**Geotechnical Report**)
 - v. Appendix G1 - Land Development Report, Revision C, Strata Group (**Civil Design Report**)
 - vi. Appendix G2 - Engineering Plans, Project No J5864, Strata Group (**Engineering Plans**)
 - vii. 3 Waters review Response, Job Number J5864, Dated 15/08/2023, Strata Group (**Review comments**)
- b. The requirements of 14.6 (items 5 Water Supply, 6 Stormwater Disposal, and 7 Sanitary Sewage Disposal) of the Central Hawke's Bay District Plan (**Operative Plan**) and SUB-S5, SUB-S6, SUB-S7, SUB-AM4, and SUB-AM5 of the Central Hawke's Bay Proposed District Plan (**Proposed Plan**);
- c. Relevant plans and codes of practice:

- i. Hastings District Council Engineering Code of Practice, December 2020
- ii. Hawkes Bay Regional Council – Waterway Guidelines, Stormwater Management
- iii. Hawkes Bay Regional Council – Regional Resource Management Plan, Rule 37 (onsite wastewater) and Rule 42 (stormwater discharge)
- iv. New Zealand Fire Service Firefighting Water Supplies Code of Practice SNZ PAS 4509:2008
- v. Niwa – High Intensity Rainfall System (HIRDS) – version 4
- vi. Ministry of Business, Innovation & Employment - Acceptable Solutions and Verification Methods for New Zealand Building Code Clause – E1 Surface Water, Amendment 12, November 2023

4. Executive summary

- 4.1. The development proposes on-site servicing for stormwater disposal, wastewater disposal and water supply, with only stormwater and drainage facilities proposed to be installed at the time of the subdivision. Water supply and wastewater disposal would be installed as part of individual development on each lot at the building consent stage, along with additional stormwater facilities.
- 4.2. Many of the submissions opposing the proposed subdivision have raised valid concerns on the potential impacts of additional runoff, contamination, land stability and the risks of future climate change and that responsibility is left to future owners for establishing the required servicing facilities and for maintenance.
- 4.3. Whilst the development has the potential to generate significant environment effects, through additional stormwater runoff and wastewater discharges with impacts on land instability and discharge of contaminants to the environment, the proposed infrastructure, and requirements for future building development generally addresses the potential effects. Some aspects will need to be confirmed as part of the infrastructure design and at the time of building development as noted in recommended resource consent conditions and consent notices.
- 4.4. Long-term mitigation of potential effects will however rely on regular inspection, maintenance, and repair of the proposed infrastructure and facilities. As the facilities are on-site and maintained by individual property owners, including some shared stormwater infrastructure by the balance lot owner, the risk of non-compliance is high, and ongoing enforcement would be required by CHBDC and HBRC. Alternative arrangements for the management and maintenance of the shared facilities should be considered.

5. Overview of Application

- 5.1. The Application describes the subdivision proposal in detail. However, by way of summary, it involves an 11-lot subdivision of land comprising of eight rural lifestyle allotments (Lots 1, 3, 4, 6 to 10), two balance allotments (Lots 11 and 12) and a separate lot (Lot 13) to be amalgamated with the adjoining property at 38 Okura Road (legally described as Lot 1 DP 25627). It is to be completed over four stages. An excerpt of the proposed scheme plan is included in **Figure 1** below.

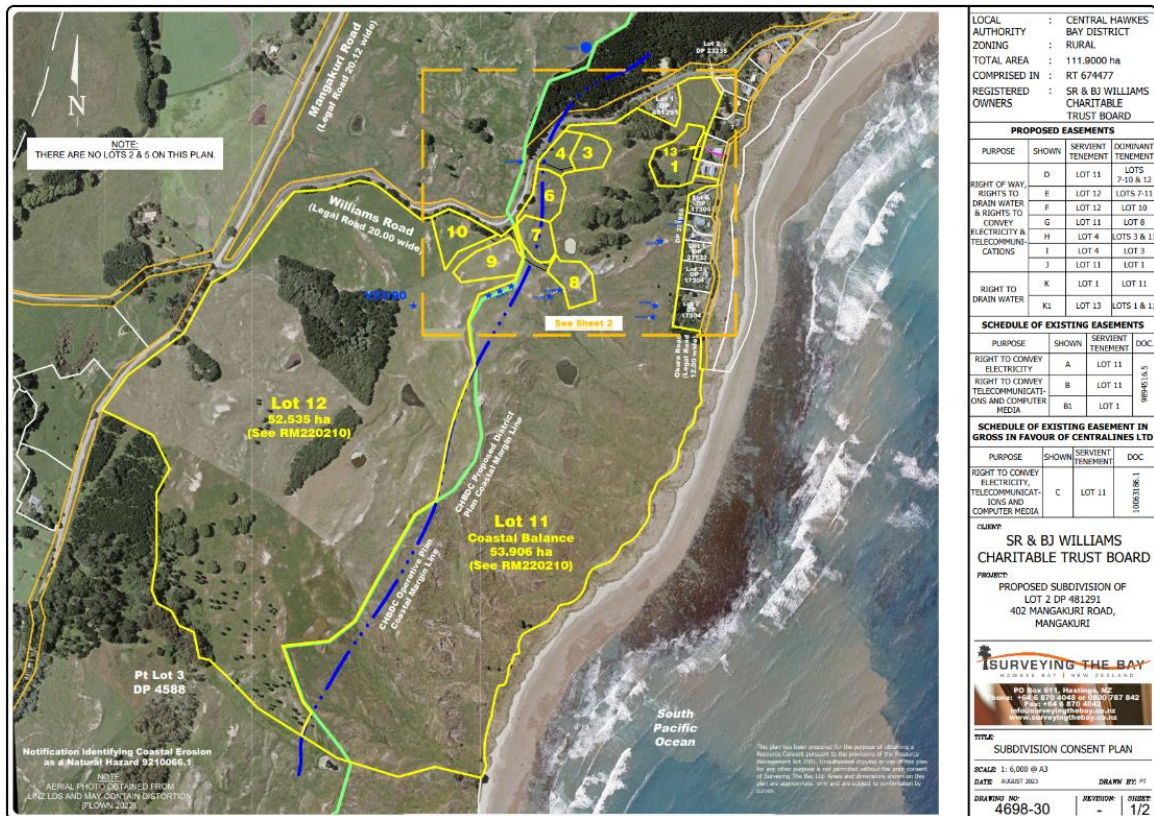


Figure 1: Excerpt from Scheme Plan

- 5.2. The Application is for subdivision consent only, and no land use consent has been applied for in relation to development of the proposed lots (e.g. for potential non-compliance of development with the Operative Central Hawke’s Bay District Plan’s Rural Zone’s permitted activity rules, such as minimum setbacks of residential dwellings from internal boundaries).
- 5.3. I understand that the subdivision proposal requires consent as a discretionary activity pursuant to rule 9.9.4 of the Operative Plan as it is unable to comply with all relevant subdivision performance standards in standards 9.10(1)(a)-(i) of the Operative Plan.

6. Summary of proposal

- 6.1. The way the proposed allotments are to be serviced is set out in the AEE (Section 3.7 and Appendix G1 and G2). A summary is provided below.

Water Supply (including for firefighting purposes)

- 6.2. Water supply is to be provided via individual rainwater tanks established at the time of building development for each rural-residential lot. All on-site water tank systems will be fitted with a 100 mm diameter firefighting coupling for firefighting purposes. The applicant offers consent conditions that requirements are imposed via consent notices to this effect.
- 6.3. The applicant also proposes consent notices requiring compliance with SNZ PAS 4509:2008 Firefighting Water Supplies Code of Practice. The applicant indicates that this could be achieved through the provision of individual water supply tanks for each residential dwelling; however, shared provision for water supply for fire-fighting purposes may be explored at detailed design stage. In either scenario, the applicant offers a consent condition to ensure compliance with SNZ PAS 4509:2008 is achieved on an ongoing basis.

Wastewater

- 6.4. The provision of an on-site wastewater system will remain the responsibility for any landowner of the lots at the time of building development for each, as no wastewater system is proposed to be installed at the time of the subdivision.
- 6.5. The Landscaping Concept Plan and Infrastructure Assessment submitted with the application notes areas that could be used for on-site wastewater disposal fields near each building platform on Lots 1, 3, 4, 6, 7, 8, 9, & 10. The basis of the disposal field sizing is not stated.

Stormwater

- 6.6. The applicant explains that the stormwater design is to achieve neutrality across the development, and not increase stormwater flow rates to any of the properties that adjoin the eastern boundary. The applicant has confirmed that the following measures are proposed:
 - a. The redirection of run-off from proposed Lots 6, 7 and 8 building platforms conveying this to the west for Lots 6 and 7 and south for Lot 8;
 - b. Modification of the existing pond so a portion of the pond volume is utilised for stormwater detention and to restrict flow rates in Catchment B;
 - c. Construction of a dry stormwater detention pond to restrict flow rates in Catchment C;
 - d. Construction of a dry stormwater detention pond (dry pond B) to restrict flow rates from Catchment A; and
- 6.7. On-site stormwater detention is also proposed for each of the 8 rural lifestyle lots in a manner which provides additional detention capacity, enforced via a consent notice registered against each title. The storage is proposed to be achieved by allocating the top part of water supply rainwater tanks for stormwater detention. Overflow from the tanks to bubble-up trenches are proposed for each rural lifestyle lot to disperse the stormwater flow over a wider area and minimise erosion.
- 6.8. Infrastructure is proposed along the formed access R.O.W with side drains, culverts and channels to direct stormwater runoff to controlled points with erosion protection riprap at outlets. In addition, as noted above, stormwater ponds are to be provided as either new dry ponds or modification to the existing pond at the site to provide detention storage. A new stormwater system and discharge to the beach from the access to Lot 1 is also proposed.

7. Site locality and description of the environment

- 7.1. The site is located at Mangakuri Beach and comprises largely of a rural / coastal environment, with Mangakuri Beach located immediately to the east of the site and neighbouring properties to the north, west and south predominantly used for pastoral farming.
- 7.2. The site has an area of approximately 111.9 hectares and is generally irregular in shape. The general topography comprises elevated terrain to the west (100 to 60 m elevation) sloping down to the east (30 to 20 m elevation). Three separate gully catchments are defined at the site that are spring fed with ongoing seepage noted. Land instability with recent landslides on steeper slopes and expansive soils are also noted across the site, with significant limitations for soakage systems.

7.3. There are several blocks of trees including a cluster of poplars in the north-eastern portion of the site that have been planted to help with stormwater runoff and slope stability and a mixed tree block in the north-western portion of the site.

7.4. There are also several stock drinking water ponds spread over the site.

8. Reasons for Discretionary Consent

8.1. None of the reasons for discretionary consent relate specifically to stormwater, wastewater or water supply.

9. Technical assessment of effects

9.1. The assessment of effects includes the servicing related effects of the stormwater runoff, water supply and wastewater with reference to the Civil Engineering Report and Geotechnical Report. The effects assessment is focussed on the stormwater elements and notes:

a. Given the potential for slope instability the proposed stormwater design is a critical servicing component for this subdivision. For this reason, a post development catchment management plan has been developed by Strata Group and is integrated into the access and building platform construction works that will be completed as part of the subdivision prior to s224 certification.

b. Potential adverse effects could arise from increased stormwater runoff resulting from the development to the east and therefore towards the Okura Road beach houses. The Strata Group Report demonstrates that the post development stormwater discharge will be less than the predevelopment discharge to the east. Due to the recontouring earthworks involved there will be an increase in post development discharges to the Mangakuri Station farmland (being the Applicant's land) to the north of Williams Road. Channel improvements to reduce initial velocities are proposed to reduce the risk of scouring on the land north of Williams Road.

c. With the civil engineering designs and recommendations proposed as outlined in section 3.1.5 of this AEE, Strata Group consider the proposed development to be serviceable and feasible from an engineering perspective. Accordingly, any servicing related effects resulting from the subdivision are able to be avoided, remedied or mitigated.

9.2. The Applicant has generally used appropriate design guidelines and assumptions in the water supply, stormwater and wastewater technical assessments and assessment of effects. I generally agree with the approach and findings except for the following matters:

a. The basis of the wastewater disposal field sizing related to a design flow allowance including size of dwelling, number of bedrooms or population equivalent or what allowance for reserve areas, has not been included in the Civil Design Report. It is recommended that the applicant clarify the servicing basis and the size of dwelling that would be appropriate given the land limitations of each lot. This assessment should be in accordance with AS/NZS 1547 (On site domestic wastewater management) and with reference to the conditions of HBRC RRMP rule 37. Any limitations to servicing should be included in the consent notice for each individual lot.

b. Whilst not a requirement of the code of practice, calculations for pre-development runoff should consider rainfall based on historic intensity data, rather than future climate adjusted rainfall, to ensure that the development is sustainable in the longer term. Post-

development and infrastructure designs should consider future climate adjusted rainfall using Representative Concentration Pathway (RCP) 8.5 at 2081-2100.

- c. There are some inconsistencies in the stormwater calculations with time of concentration used and assumptions that do not meet the HBRC waterway guidelines. These inconsistencies are generally minor enough so as to not affect the feasibility of the development and can be addressed as part of the detailed design of the proposed infrastructure, with appropriate resource consent conditions included.
- d. Additional stormwater runoff to the north of Williams Road is noted to increase for the 2-year event, but not the 100-year event. It is recommended that the design of the dry pond outlet provides restricted flow for intermediate storms (2-year and 10-year events), to not increase runoff for these, in accordance with the HBRC waterway guidelines.
- e. The proposed ponds include outlet flow control using small diameter orifice fittings that could become easily blocked with debris expected in the pond. Outlet structure design should consider the environment, ease of access and frequency of maintenance to provide for reliable detention performance.
- f. There is no specific detail around providing access to allow for inspection and maintenance of the proposed stormwater ponds and structures. Regular inspection, maintenance and repair of the stormwater structures will be important to ensure that the effects of the subdivision can be mitigated in the longer term.
- g. No provision or detail is provided on the proposed means for screening out litter, the capture of chemical spillages, the containment of contamination from roads and paved areas and of siltation (Part 14.6, item 6c of the District Plan). This should be addressed as part of the detailed engineering design of the pond systems.
- h. No provision for monitoring mechanisms by the Applicant has been included in the Application to ensure contaminants are not discharged into the environment from on-site wastewater disposal systems (Part 14.6, item 7g of the District Plan). Although it is noted that these matters are normally dealt with as part of the Regional Resource Management Plan that has specific rules and requirements for the permitted activities under that Plan or as part of any separate resource consent sought at the time of building development.

9.3. To clarify, it is noted that the stormwater ponds would be constructed as part of the subdivision development to mitigate the additional runoff from the proposed access right of ways and drainage development constructed as part of the subdivision development. Additional development of the building sites, including dwellings that would create additional runoff with additional mitigation measures are proposed as part of the building development and building consent stage.

9.4. Overall, the potential effects of the proposed development are generally capable of being mitigated as proposed. However, there are several matters of detail that will require further consideration as part of engineering designs and approvals.

10. Statutory considerations

Operative Plan

10.1. Consideration has been given in the technical assessment above to the matters detailed in Part 14.6 Assessment Matters, specifically to:

- a. Item 5 Water supply regarding the proposed fire-fighting water supply and associated requirements.
 - b. Item 6 Stormwater disposal regarding the proposed stormwater management approach
 - c. Item 7 Sanitary Sewage disposal regarding the on-site servicing approach proposed.
- 10.2. The preliminary design and assessments of the proposed development infrastructure and future building development and associated servicing indicate that the above requirements (Part 14.6, items 5 to 7) of the Operative District Plan (ODP) can be met. There are aspects that will need to be confirmed through the final design and as part of building development, that I recommend consent conditions and consent notices on property titles are included as recommended.

Proposed Plan

- 10.3. The preliminary design and assessments indicate that the standards in SUB-S5 water supply, SUB-S6 wastewater disposal and SUB-S7 stormwater disposal of the Proposed District Plan (PDP) as well as the assessment matters in SUB-AM5 for water supply, wastewater disposal and stormwater disposal, can be met. There are aspects that will need to be confirmed through the final design and as part of building development and other consents, that I recommend consent conditions and consent notices on property titles are included as recommended.

Submissions relevant to 3 waters

- 10.4. I have read the submissions on the application and have the following comments. These are grouped by topic or concern rather than individual submitter.

Stormwater or Wastewater Effects

- 10.5. Many of the submissions state that they have concerns about “stormwater effects”, “stormwater runoff”, “increase in stormwater runoff”, or “wastewater effects” but do not elaborate on the nature of the concern to be addressed.
- 10.6. The effects have been assessed and reviewed and I have recommended conditions of consent to address these.

Major Storms and Climate Change

- 10.7. Other submissions raise concerns that major storms already create significant runoff and problems citing historic major cyclones (Bola and Gabrielle) not being considered or the increase in landslips or instability with climate change, along with the uncertainty in scale of future climate rainfall events intensity or durations.
- 10.8. The applicant has used the available rainfall intensity information with predictions of future climate. Whilst there is always uncertainty, the approach taken is the typical industry approach for a development of this scale using information provided online by NIWA, High Intensity Rainfall Design System V4 (Hirds). It is recommended that the applicant, as part of the detailed design process, considers a range of storm durations to understand the performance of the proposed stormwater detention facilities and designs for the critical duration identified. This is achieved through a recommend condition of consent including the use of storage routing modelling software. It is also recommended that the applicant provide sufficient detention to mitigate the effects of increased rainfall on pre-development runoff, based on historic rainfall intensity rather than future climate change.

Marine/Sealife

- 10.9. Additional stormwater runoff or instability and associated runoff and effect on the marine environment and sea life (reef and wildlife).
- 10.10. The applicant has not assessed the potential stormwater effects from the development on the marine environment and sea life but given the nature of the development being rural lifestyle, and that detention pond systems are proposed, these are not considered to be significant. It is noted that is on the basis that land stability issues are not exacerbated and that construction erosion and sediment control are appropriately designed and managed. If they are not, there is a high risk of sediment runoff to the sea. Note I have not reviewed the construction erosion and sediment control as this plan has not been developed and would be expected to be addressed as part of a land use consent for the earthworks. As I understand it, this is not part of the application currently before the Council.

Left to after subdivision to address

- 10.11. Wastewater and stormwater provisions not specific and leave responsibility and control to future owners without the ability to assess overall impacts or cumulative effects.
- 10.12. Generally, the cumulative effects for the stormwater systems have been assessed for the type and nature of building development expected on the identified building platforms, with conditions of consent recommended to address these.
- 10.13. Discharge consents are not being sought and so wastewater effects have not been assessed in detail other than in reference the permitted activity basis of the HBRC Regional Resource Management Plan. The applicant has identified a potential area for wastewater disposal fields on each proposed lifestyle lot within the flatter areas of a size to match appropriate loading rates for the soil type and slope. The design flow basis and any limitations from each lot should be clarified by the applicant and any limitations included on consent notices for the relevant lots.

Detention Maintenance or Ongoing function

- 10.14. Concerns raised with detention tanks or ponds performance, not maintained or altered to conserve water storage for household use and no enforcement or compliance checks to ensure compliance with intended performance.
- 10.15. This concern and associated performance risks are valid, and I note this is a limitation of all on-site infrastructure systems used throughout New Zealand. Long-term performance relies on the individual who may not even be aware of the requirements with future change in property ownership or be incentivised to comply with the requirements or to spend money on maintenance when there is no direct impact to their property of the facility not operating as it should. This is also relevant for the shared detention pond systems located in the balance Lot 11 or on the property north of Williams Road, with management by the owner of those lots.
- 10.16. A consent condition is recommended for the applicant to prepare operation and maintenance plan (OMP) for the relevant facilities as part of the detailed design and that it is submitted and approved as part of engineering design approvals. Consent notices are included on individual property titles to require compliance by the property owner; however, compliance checks and enforcement would rely on the CHBDC.

10.17. The appropriateness and risks of relying on the balance lot owner or future owners to maintain the proposed detention ponds is of concern. Consideration should be given to other appropriate mechanisms, including a body corporate arrangement for the shared infrastructure.

Dam Failure

10.18. Risks of dam failure or breach of the proposed detention ponds and implications for downstream properties or residents, especially with the unstable nature of the land at the site.

10.19. This aspect has not been assessed by the applicant and it is recommended that assessments are completed as part of the design of the proposed detention ponds, including provision of suitably sized spillways and overflow pipework, with downstream erosion protection along with inspection and maintenance activities identified. If required, engineering works could be incorporated into the pond formation including lining of the ponds to minimise seepage risks or other works to improve the dam stability.

Fire-fighting Water Supply

10.20. Submission by FENZ supports water supplies being provided in accordance with SNZ PAS 4509:2008, either at the time of building consent on each property or through a communal supply. Notes requirements for access and that some aspects of the preliminary design access R.O.W do would not comply.

10.21. Consent condition along with consent notices for future building development are recommended to require the development to comply with SNZ PAS 4509:2008.

11. Recommendation and conditions

Adequacy of information

11.1. The above assessment is based on the information submitted as part of the Application. I consider that the information submitted is sufficiently comprehensive to enable the consideration of the above matters on an informed basis. In particular:

- a. The level of information does provide a reasonable understanding of the nature and scope of the proposed activity as it relates to the Operative Plan, and the Proposed Plan.
- b. The extent and scale of any adverse effects on the environment in terms of stormwater, wastewater, and water supply are able to be assessed.
- c. Further consideration of several engineering aspects is required as part of engineering design and engineering design approvals, including the requirement for a detailed operation and maintenance plan (OMP) for the shared stormwater infrastructure and mechanisms for requiring regular inspection and maintenance to be carried out.
- d. Geotechnical or land stability risks or performance has not been assessed directly, but I note that satisfactory performance of the stormwater and wastewater systems inherently relies on them being constructed on stable land.

Conditions: 3 Waters

11.2. I understand that the Application seeks the grant of resource consent subject to the Council's standard conditions for subdivision. I consider that additional conditions are required to

address the matters raised in this memorandum. My recommended additional conditions or aspects to be addressed in conditions are:

- a. Time of concentration for design of culverts, channels and overflows shall be based on the time of concentration calculated in accordance with the method detailed in NZBC E1/VM1 Section 2.
- b. The development shall mitigate stormwater runoff to pre-development rates in accordance with the HBRC Waterway Guidelines for the 2-year and 10-year ARI events and less than 80% of the 100-year event using the future climate rainfall intensity from RCP8.5 2081-2100. The required detention volumes and outlet details shall be confirmed through pond routing using a flow routing programme for a range of storm durations from 10 minute up to 24 hours in duration. Ponds should drain within an acceptable period in accordance with the HBRC waterway guidelines.
- c. Stormwater outlets, via proposed bubble-up trenches, shall be designed for each of the proposed 8 building platforms generally in accordance with the Civil Design Report, with details submitted with Engineering designs for approval. Stormwater outlets shall be constructed at the time of building platform formation.
- d. Integrity of the existing pond shall be assessed by a geotechnical engineer, with appropriate site investigations and testing of the existing dam embankments and adjacent land, to confirm it as being satisfactory for use as a detention storage or any remedial works to be carried out as part of the modifications to the pond, including provision of lining or foundation stability works. Details of the assessments and findings for the existing and proposed ponds, including design information shall be submitted for engineering design approval of the detention ponds.
- e. Cut-off drains shall be formed with minimum depths to achieve freeboard to peak design water levels of at least 500mm height, in accordance with NZS 4404.
- f. An Operation and Maintenance Plan (OMP) shall be prepared as part of the detailed design for the stormwater infrastructure and facilities to document the regular inspection maintenance and repair for the ponds including outlet structures and overflows, culverts and rip-rap outlets. The OMP shall be submitted for approval as part of engineering design approvals and referenced on the consent notice for the applicable lots. An OMP shall also be prepared for the bubble-up trenches installed with the building platforms and referenced in consent notices for those lots provided with building platforms.

Note: additional access provisions maybe required to provide adequate access to and around the proposed stormwater infrastructure and facilities including the wet and dry ponds, to allow for inspection and maintenance activities to be carried out.

- g. Consent notices shall be placed on individual property titles as follows or to address the following aspects:

Building Platform Stormwater Detention and Outlets

- i. Stormwater detention shall be installed in accordance with the requirements of the approved final Civil Design Report, approved as part of engineering design approvals for the development. Any overflows of roof area rainwater tank discharges shall be via the installed bubble up trenches. Stormwater detention shall be always maintained in operating condition at the minimum required volumes,

including regular clearing of outlets, control orifices and inlet screens in accordance with the OMP provided with the development.

- ii. For developments with building area coverage greater than 300m² or where the proposed detention is in underground tanks, a specific design by a competent Civil Engineer will be required to meet the same objectives, restricted outflows equal to or less than those shown in the final approved Civil Design Report. Any other stormwater discharge from the building platforms shall be installed in a manner that does not result in any scouring or erosion at or downstream of the discharge point.

Fire-fighting Water Supply

- iii. All dwellings shall have a firefighting water supply that includes adequate water storage volume, pipe fittings and vehicle access for Fire and Emergency New Zealand (FENZ) to that supply, that complies with the requirements of the New Zealand Fire Service Firefighting Water Supplies Code of Practice SNZ PAS 4509:2008.

Advice note: Consultation and agreement on an alternative firefighting water supply such as water sprinklers or communal supplies and associated access (to the water supply and dwelling) will need to be sought from Fire and Emergency New Zealand and evidence of this agreement provided to Central Hawke's Bay District Council for its consideration and agreement when determining whether the consent notice relating to the New Zealand Fire Service Firefighting Water Supplies Code of Practice SNZ PAS 4509:2008 has been satisfied.

Wastewater Disposal

- iv. Disposal field limitations for the lots shall be confirmed by the applicant and any limitations on scale of dwelling that could be serviced on-site, to meet the permitted activity of the HBRC RRMP Rule 37, noted.

Conclusion

- 11.3. Whilst development has the potential to generate significant environment effects, through additional stormwater runoff and wastewater discharges with impacts on land instability and discharge of contaminants to the environment, the proposed infrastructure, and requirements for future building development generally address the potential effects. Some aspects will need to be confirmed as part of the infrastructure design and at the time of building development as noted in recommended resource consent conditions and consent notices. Long-term mitigation of potential effects will however rely on regular inspection, maintenance, and repair of the proposed infrastructure and facilities. As the facilities are on-site and maintained by individual property owners, the risk of non-compliance is high, and ongoing enforcement would be required by CHBDC and HBRC. Alternative arrangements for the management and maintenance of the shared facilities should be considered.