IN THE MATTER OF	The Resource Management Act 1991
AND	
IN THE MATTER OF	Resource consent application **CRC074090** by Freyberg Developments Limited to discharge stormwater containing contaminants from a residential subdivision onto land in circumstances where it may enter surface water
BETWEEN	Freyberg Developments Limited **Applicant**
AND	**CANTERBURY REGIONAL COUNCIL** **Respondent**

DECISION OF THE HEARING COMMISSIONERS
16th February 2009

Heard on the 17th and 18th November, and 12th December 2008 in the Council Chambers at the offices of the Canterbury Regional Council, 58 Kilmore Street, Christchurch.

Hearing Commissioners:
Ms Sharon McGarry (Chair)
Councillor Eugenie Sage

REPRESENTATIONS AND APPEARANCES

The Applicant:

Mr G. Cleary, counsel
Mr P. van Eeklen, representing the applicant
Mr J. Hunt, representing the applicant
Ms N. Malloch, environmental engineer
Ms P. Harte, planner

Submitters:

Mr B. Rawstron, representing Rossendale Holding Limited
Mr R. Long, representing himself and Mrs M. Long
Mr M. Sinclair, environmental engineer, witness for Mr and Mrs Long
Mr P. Sintes representing Lansdowne Resource Limited
Mr D. Foster, representing D & P Foster Family Trust
Ms J. McAndrew, counsel for the Jordan Family Trust (17th and 18th November only)
Mr G. Jordan, witness for the Jordan Family Trust (17th and 18th November only)
Mr C. Fox, surveyor, witness for the Jordan Family Trust (18th November only)
Mr P. Horgan, environmental adviser representing Te Rūnanga o Ngāi Tahu and Te Taumutu Rūnanga (18th November only)

Section 42A reporting officer:

Mr P. Christensen, consulting water resource engineer
Mr R. Vesey, regional engineer for Canterbury Regional Council, witness for reporting officer (12th December only)

BACKGROUND AND PROCEDURAL MATTERS

1. This is the decision of the Hearing Commissioners Councillor Eugenie Sage and Ms Sharon McGarry (Chair), appointed by the Canterbury Regional Council ("CRC") to hear and determine an application by Freyberg Developments Limited ("the applicant") to discharge stormwater containing contaminants from a residential subdivision onto land in circumstances where it may enter surface water.

2. The applicant applied for a certificate of compliance on the 25th June 2008 and the application was declined on 14th July 2008. The applicant lodged an objection to the decision to decline the application for a certificate of compliance on the 25th July 2008. An objection hearing was conducted on 16th September 2008 and Commissioner McGarry dismissed the objection.

3. This application for a discharge permit was notified in accordance with section 94 of the Resource Management Act 1991 ("the Act" or "RMA") to nine potentially affected parties on 19th February 2008. Seven submissions in opposition to the application were received within the statutory timeframe and all submitters stated they wished to be heard at a hearing.

4. The hearing commenced at 9.30am on Monday 17th November 2008 and evidence was heard over two days. The hearing was adjourned to enable the reporting officer to undertake further analysis of the application and to seek comment on the application from CRC's Regional Engineer. A site visit was undertaken on Monday 24th November 2008. The hearing was reconvened on Friday 12th December 2008 and all parties were given the opportunity to comment on the further information. The hearing was closed on 16th January 2009 on the completion of our deliberation.

5. Prior to the hearing, a report was produced pursuant to section 42A of the Act by the reporting officer, Mr Peter Christensen. The report provided an analysis of the

matters requiring consideration and recommended that consent could be granted if the applicant can implement additional mitigation measures.

THE APPLICATION

6. The applicant is seeking resource consent to authorise the discharge of stormwater and contaminants associated with the subdivision of a 3.43 hectare (ha) site into 12 residential allotments at 288 Kennedys Bush Road, Christchurch.

7. The application site is zoned for residential development (Living Hills A and Living Hills B) in the Christchurch City Council's City Plan and an application for resource consent for the subdivision has been lodged with the Christchurch City Council (CCC). The proposed allotments range in size from 1,500 square metres (m^2) to 4,329 m^2, and the subdivision will be served by a right of way off Kennedys Bush Road.

8. The site is currently in pasture and stormwater runoff from the site naturally drains to a gully with an ephemeral watercourse on the western boundary of the site, which discharges to the Lansdowne Valley floor and the Halswell River via farm drains including Minson's Drain and Jones' Creek. The site contains an existing dwelling and accessway.

9. The adjacent properties are residential lifestyle blocks that are primarily in pasture and are zoned for residential development in the City Plan.

10. The applicant proposes to direct runoff from the right of way to a stormwater treatment "raingarden" system via kerb and channel. The raingarden has the capacity to treat in excess of the 25 millimetre (mm) first flush of rainfall. Runoff from impervious surfaces on individual lots will be directed into 25,000 litre (L) storage tanks (one for each lot) intended to attenuate post development flows to pre development levels. Each individual storage tank will discharge at a rate of 0.33 litres per second (L/s) and when they reach capacity an overflow pipe will discharge to a piped stormwater system. The applicant has designed the system

for a 5% annual exceedence probability (AEP) rainfall event (20 year) regardless of duration.

11. Discharge from the raingarden and storage tanks will be directed into the piped stormwater system and discharged to the gully on the western boundary of the site via an energy dissipation outlet structure. The gully is primarily on the neighbouring property owned by the Jordan Family Trust. The gully discharges into a small farm drain on land owned by Rossendale Holding Limited and flows to Jones' Creek via drains, which run along the boundary of the property owned by Mr and Mrs Long and Minson's Drain. Jones' Creek joins Lansdowne Valley Creek and discharges into the Halswell River and eventually into Lake Ellesmere/Te Waihora.

12. The applicant is seeking consent duration of 35 years.

THE HEARING

The applicant's case

13. **Mr Gerard Cleary,** counsel for the applicant, conducted the applicant's case presenting legal submissions and calling two witnesses. In summary, Mr Cleary made the following main points:
    - The land is zoned for residential purposes, the zoning is beyond legal challenge and is consistent with the Regional Policy Statement (RPS) and proposed changes to urban limits;
    - The proposed level of stormwater treatment and attenuation is greater than current best practice;
    - Although it is still maintained that the proposal is a permitted activity under Rule WQL 6 of the proposed Natural Resources Regional Plan (NRRP), if it is considered as a discretionary activity under Rule WQL 56, all relevant performance standards are complied with;
    - The receiving environment (gully with an ephemeral watercourse) is not considered to have any special sensitivity, although it is acknowledged that there are periodic flooding issues associated with the wider receiving environment of the Lansdowne Valley;

- The applicant has considered alternative methods of discharge but given the sites location the proposal is the only practical option available;
- The quality of the proposed discharge will not result in any of the effects set out in section 107 of the RMA;
- Ms Malloch's calculations are extremely conservative and conclude that any potential effect on flooding in the Lansdowne Valley will be negligible, at worst increasing flood levels by 2.2 mm;
- In the decision *Cashmere Park Trust v Canterbury Regional Council* C 48/2004, the Environment Court found that an increase in flood levels in Henderson Basin of 2 mm was minor;
- The level of treatment proposed will result in any water quality effects being indiscernible;
- Cumulative effects have been assessed as less minor, but it is inappropriate to consider potential "off-site" stormwater discharges for which consent is required given that it is CRC's position that no stormwater discharges in Living Hills A and Living Hills B are permitted as of right;
- Rule WQL 6 Condition 7 aside, the applicant has demonstrated compliance with all relevant conditions in WQL 6, establishing a clear presumption that the proposed discharge is consistent with all relevant objectives and policies;
- The proposal will provide for the social well being of the future residents and this positive effect must be taken into account;
- All effects are avoided, remedied or mitigated by achieving a standard beyond best practice;
- The applicant proposes a suite of conditions, including maintenance of the raingarden by way of consent notice registered against the relevant titles; and
- Granting consent will enable to the development to proceed and would be directly consistent with the purpose of the Act.

14. **Ms Nicola Malloch**, an environmental engineer with 12 years experience, gave evidence describing the existing site and the proposal, and the assessment of environmental effects undertaken. In summary, Ms Malloch made the following main points:

- The top quarter of the site (with frontage onto Kennedys Bush Road) is zoned Living Hills A with a minimum lot size of 1500 m^2 and the remainder of the site is Living Hills B with a minimum lot size of 3000 m^2;
- Reticulated services will be provided to all new lots;
- The raingarden will be an underground structure, which will have gravel and sand/soil layers with appropriate planting and will provide both treatment and attenuation function that are consistent with best practice;
- The application includes the existing dwelling and rainwater storage tank, and this will be connected to the proposed pipe system;
- The gully receives runoff from a portion of Kennedys Bush Road discharged via a pipe just below the neighbouring property at 286 Kennedys Bush Road;
- The Lansdowne Valley accepts stormwater runoff from a very large rural catchment of approximately 1000 ha and due to the low lying nature of the valley floor this area experiences regular ponding of floodwaters;
- The total catchment area contributing discharge to the gully is approximately 100 ha, and the site is only 3.4 ha or 3.4% of the catchment or 0.34% of the Lansdowne Valley catchment;
- A further 4-5% of the gully catchment is zoned for residential use with the remainder of the catchment zoned Rural Hills;
- Although the Halswell River is over 1.1 kilometres (km) away from the point of discharge, water can not drain away until the Halswell River peak starts to fall and CRC have determined that a 2% AEP (50 year) storm with a 60 hour duration is the critical storm;
- Stormwater volumes have been calculated assuming an average imperious area of 500 m^2, a pre-development co-efficient of 0.4 and a post development co-efficient of 1.0 (for a 2% AEP storm), and using rainfall intensities from Appendix 10 of the CCC's Waterways, Wetlands and Drainage Guide (WWDG);
- Installing 25,000 L rainwater storage tanks would reduce post development peak flows to below the existing pre-development peak flows for the majority of storms, including the critical storm;
- The CCC requires the use of 9,000 L storage tanks and guidelines will ensure proper installation and maintenance;

- Storage tanks will be required as a condition of the subdivision consent and a condition relating to ongoing maintenance will need to be registered as a consent notice on the titles, along with a condition requiring monitoring;
- To mitigate the effects of increased volume on ponding in the Lansdowne Valley it is proposed to restrict the discharge rate from the storage tanks to 0.2 L/s and 0.27 L/s from the raingarden;
- Calculations indicate that use of 25,000 L storage tanks instead of 9,000 L, will only reduce ponding levels by 0.7 mm and does not justify use of the larger tanks;
- Erosion and scour effects are reduced by reducing peak flows in the majority of storm events and the proposed outfall structure (amended since the original application was submitted) will spread the discharge and dissipate the velocity;
- The calculations made are based on 3.6 mm of rainfall over 60 hours, and this is less than the rainfall (130 mm over 3 to 4 days) for the August 1992 storm event, where aerial photographs of the Lansdowne Valley show an area of approximately 25 ha covered in ponded water;
- Potential cumulative effects from existing residentially zoned areas have been considered (despite the fact that resource consent will be required) assuming a total of 72 dwelling sites (including this application and the Rock Hill site) and an average of 500 m^2 of impervious area. Calculations indicate a increase in the depth of ponding by 16 mm;
- A more detailed Erosion and Sediment Control Plan (ESCP) has been prepared;
- The discharge point is on the application site approximately 7 metres (m) inside the boundary;
- There is no need to model the receiving waterways as the detention provided reduces peak flows in most storms, and in storms were peak flows may increase, the drains are already compromised with extensive natural ponding;
- The Jordan Family Trust's concerns relate to the existing CCC pipe outfall, which is above the proposed discharge point and will not be affected by the proposal;

- Previous problems with the CCC pipe outfall of at the top of the gully related to an unauthorised alteration to the sump in Kennedys Bush Road and this has been remedied; and
- Extreme conservatism has been built into all the calculations and with the mitigation measures proposed the effects of the discharge are minor and consent can be issued subject to the proposed conditions.

15. **Ms Patricia Harte**, a planner with 23 years experience, gave evidence addressing planning aspects of the application. In summary, Ms Harte made the following main points:
    - Under the Transitional Regional Plan (TRP) the proposal requires consent as an inominate activity, which is a discretionary activity under section 77C of the Act;
    - Although the proposed discharge is likely to meet the water quality standards in Schedule 1 of the NNRP, the proposal will not comply with Condition 7 of Rule WQL 6 of the NRRP because the receiving water is "dirtier" and therefore must be assessed as a discretionary activity under Rule WQL 56;
    - Rule WQL 56 is a catch all discretionary activity rule which picks up a variety of discharges making it very complex, convoluted and confusing, and reads that the proposed activity is a discretionary activity and does not have to meet the conditions listed in the Conditions column;
    - Due to the complexity of the rules the possibility that the proposal could be considered as a non-complying activity has been assessed;
    - Ms Malloch and the reporting officer agree that the mitigation proposed will result in adverse effects on surface water quality that are less than minor;
    - The proposal meets the permitted activity standard (Rule WQL 6 Condition 8(b)) by not increasing the flow in the receiving body by more than 1% in a flood event with an AEP of 20%;
    - Concern regarding the volume of water discharged into the valley during longer duration events are addressed by limiting the rate of discharge from the storage tanks and the raingarden. The resulting increase in ponding in the valley is calculated to be 1.5 mm (9,000 L tanks) to 2.2 mm (25,000 L tanks), which may not even be discernable;

- The proposed NRRP does not require that the discharge will not increase the runoff volume for a critical storm and discharge rates proposed by the applicant are less than those suggested by the reporting officer;
- The prepared ESCP reflects current best practice for hillside developments;
- The proposal will have positive effects by providing high quality housing and reducing pre-development flow rates;
- The assumptions used by Ms Malloch are conservative and any adverse effects of the proposal are negligible;
- The relevant sections of the RPS are Chapter 5 – Tangata Whenua Values, Chapter 9 – Water, Objective 3 and Policy 9, Chapter 12 – Settlement and the Built Environment, Objective 1, Chapter 16 – Natural Hazards, Policy 3 and Proposed Change 1;
- The relevant sections of the NRRP are Chapter 4 – Water Quality, Objective WQL 1.1 and Policy WQL 1 and Policy WQL 3; and
- Overall the proposal is not contrary to the various objectives and policies of the RPS and proposed NRRP, is in accord with Part 2 of the Act, and therefore consent should be granted;

Submitters

16. **Mr Brent Rawstron**, presented a submission in opposition to the application on behalf of Rossendale Holdings Limited. Mr Rawstron has farmed the neighbouring property to the application site for 32 years, and has previously farmed neighbouring land owned by the Sintes and Longs. Mr Rawstron explained his company opposed the application as submitted, but does not oppose the subdivision. Mr Rawstron tabled photographs of the existing dam structure and piping (downstream of the gully on Rossendale land), and a plan of an alternative stormwater storage system. In summary, he made the following main points:
    - The company is concerned about cumulative effects as the land above the property is zoned Living Hills A and B and would allow for in excess of 100 houses to be built in the future;
    - The valley floor floods regularly and the addition of 100 house and hard surfaces will have a marked effect on runoff and flooding downstream;

- The application should not be viewed in isolation to the wider catchment and all developments must not increase deleterious effects on downstream properties;
- It is the responsibility of the CRC to improve the efficacy of the drains, streams and river, and to maintain consistent strict criteria for developers;
- Maintenance of the proposed system is critical to its performance and this should not be the role of CCC, what happens after 35 years?
- Increased runoff will have an effect on the Halswell floodplain;
- If approved this system will be considered for other subdivisions;
- The applicant has not considered alternatives and there is a feasible alternative to develop a system, which would be capable of taking all the stormwater from the 97 ha catchment that would greatly improve flooding in the Lansdowne Valley; and
- The application should be dismissed as presented, and a viable alternative and sustainable stormwater system should be developed on Rossendale land.

17. **Mr Ron Long**, gave a submission in opposition to the application on behalf of himself and his wife. Mr and Mrs Long have lived on their property in the Lansdowne Valley for 17 years and farm beef cattle and produce hay and baleage for the dairy industry.

18. Mr Long tabled extensive photographs showing their property and house during flooding in 1992, 2006 and 2008, and a legal opinion from Harmans Lawyers regarding the proposed discharge. In summary, Mr Long made the following main points:
    - When they purchased the property they were aware of flooding issues but over the last few years they have noticed a considerable increase in the frequency of flooding, and rainfalls have been lower;
    - Investigations have revealed two significant new sources of water, the Van Asch subdivision, and the kerb and channel sump on Kennedys Bush Road;
    - Flooding now occurs after 18-25 mm of rain over 24 hours, whereas previously it would take at least 60-80 mm of rain;
    - Flooding impacts pasture and their garden which has taken years to develop;

- If the Freyberg proposal proceeds in its current form it will set a precedent for all future applications for land already zoned for development;
- The landscaping trend now is towards a low maintenance environment which will include paving, hard areas, driveways and weed mats, which tend to deflect water rather than absorb it;
- The reality is a section will discharge more water into the gully than would occur under normal vegetation;
- Rainwater storage tanks are a critical component of the proposal and without ongoing maintenance the tank outlet will block and stormwater will be discharged via the overflow pipe;
- The effect the proposal will have on the Long property will be to delay the water receding;
- Three yearly maintenance of the storage tanks is a nonsense and they will fail;
- Stormwater management needs a long term, catchment wide plan to be implemented;
- An alternative such as Mr Rawstron's stormwater management scheme that discharges directly to the Halswell River is the only long term solution, however the Halswell River may not have capacity either;
- To defend their position the Longs have commissioned Eliot Sinclair to undertake a detailed survey of the Lansdowne Valley drainage area, and the results of the survey clearly show the system is not able to accept further discharges;
- The legal opinion provided is quite clear that developers cannot discharge water via the farm drainage system if it is shown to have a negative effect on the Long property; and
- The increased frequency of flooding is having an economic impact on the farm's viability and this matter has cost a considerable sum of money; and
- The application should be declined until a long term strategy for the area is developed.

19. **Mr Marton Sinclair,** an engineer and surveyor with 33 years experience, appeared as a witness for the Longs and presented evidence detailing the existing Lansdowne Valley drainage system. Mr Sinclair's evidence included an aerial

photograph showing the drainage system and flow directions, an oblique photograph of the Long property showing the drainage system and the Halswell River, photographs taken in July 2008 of uncontrolled flood flows, and oblique photographs showing the extent of ponding taken in August 1986, August 1992 and July 1994.

20. In summary, Mr Sinclair made the following main points;

- The Lansdowne Valley comprises two largely independent drainage systems, Minson's Drain (System A) and Jones' Creek/Lansdowne Valley Creek (System B);
- The topographic survey data shows that the location of the discharge point to Jones' Creek shown on CRC's Geographical Information System (GIS) is inaccurate and that NIWA's Water Resources Explorer incorrectly shows connection of the two system by the central drain;
- The lower parts of Jones' Creek/Lansdowne Valley Creek drain system has a much higher capacity than Minson's Drain, which is flooded at reoccurrence intervals less than 2 years;
- It is possible that in extreme events that water could flow from System B into System A in the vicinity of the central drain;
- In System A, the majority of the water flows from a gully system to a partially piped drain to the north of the Long's property, to a deeply incised drain to the east of the Longs's house, to a shallow drain along the south boundary of the Long property and into Minson's Drain;
- Minson's Drain was re-graded in 2007 and a culvert with a flap valve was installed to replace a previous flap valve structure;
- Flows from the northern, eastern and southern braches of Minson's Drain concentrate near the central pond and drain to the west;
- The capacity of the drain to the west of the central pond is limited due to inadequate fall and culvert diameter and frequent ponding begins soon after flows arrive;
- An increase of 16 mm in flood levels is estimated to be equivalent to 12.8 metres of lateral spreading, equating to approximately 3900 m^2 on the valley floor;

- Given flood waters take weeks to dissipate, the increased depth will add significantly to the time of flooding;
- When compared to System A, System B has a much larger catchment and a larger capacity;
- The culvert and flap valve at the confluence of Jones' Creek and Minson's Drain is intended to prevent backflow from Jones Creek into Minson's Drain but may hinder discharges from Minson's Drain;
- Lansdowne Valley has a long history of flooding issues, flooding for 3-7 day in medium size storm events (30-50 mm of rainfall), and up to one month for large storm events;
- Correlation of rainfall data and with three historic storm events that caused extensive flooding in the valley (documented by aerial photographs) indicates the flooding was caused by storm events with large but not extreme intensity and rainfall depth (2-5 year Average Rainfall Intensity (ARI));
- The key issue is not about peak flow rates but rather increased runoff volumes;
- The assumptions used by the applicant in calculating stormwater volumes generated by the subdivision are not as conservative as claimed enough;
- Based on a discharge rate of 0.33 L/s a 25,000 L storage tank would drain in 21 hours, however last winter's flooding occurred after 34 mm of rainfall (less than a 2 year ARI) and lasted for approximately one week;
- The proposal is unacceptable as it will discharge the extra volume at a point in time when the valley floor is flooded and will exacerbate existing flooding;
- Given that the storage tanks will discharge from the time of first in flow and the time they take to empty, the tanks would have no practical effect;
- Alternative proposals such as Mr Rawstron's suggested detention ponds may be worthy of further investigation, but cannot be taken into consideration for this application; and
- The catchment is subject to extreme flooding over long periods any intensification of residential land use upstream will contribute to flooding in the valley and will prolong the duration of flooding.

21. In response to questions Mr Sinclair was of the opinion that the drains could be upgraded, but options are limited because of the flat land gradient options. He

confirmed that he had calculated an increase in ponding depth of 4 mm and that a 2-4 mm increase is significant because it would increase the time it would take for the water to drain away.

22. **Mr Paul Sintes,** gave a submission in opposition to the application on behalf of his company Lansdowne Resource Limited (LRL). Mr Sintes farms a 20 ha property on Old Tai Tapu Road to the south of the Long property and has lived there for 20 years. In summary, Mr Sintes made the following main points:
    - Any further stormwater discharge into the Lansdowne Valley will have a major impact on and will exacerbate existing and historical flooding issues;
    - The proposal will negatively effect financial returns to LRL and other farming businesses in the area;
    - The applicant's assessment of effects is not realistic, based on tenuous assumptions and lacks detail;
    - The applicant has not adequately assessed the environmental impact on the Halswell River or Te Waihora/Lake Ellesmere, or Ngai Tahu rununga;
    - Recent developments on the hillsides above the valley have resulted in significant discharges of loess laden water despite engineered systems, partly because of incorrect calculations and partly because drains can and do block;
    - No one can guarantee impervious areas will be limited as people install more hardstand and it can't be monitored;
    - If systems fail what recourse do local residents and business owners have?
    - The Halswell River and Te Waihora are identified by CRC and Ngai Tahu as sensitive controlled areas and any discharge of polluted stormwater would be counterproductive to efforts to improve and restore the environmental quality; and
    - The application will set a precedent for all the landowners with land currently zoned as residential in the catchment.

23. **Mr Donald Foster** gave a submission in opposition to the application on behalf of the D & P Foster Family Trust. Mr Foster owns a 4 ha property on Old Tai Tapu Road to the south of the Sinte property, and has lived there for 40 years. In summary, Mr Foster made the following main points:

- The application is not specific about the path of stormwater beyond Rossendale land;
- The valley floor has a propensity to pond in certain rain conditions and granting consent will adversely affect productive land use, stock management, amenity and property values;
- Standard mitigation measures during earthworks on recent subdivisions (e.g. Rock Hill) have proven to be inadequate to prevent the discharge of sediment and contaminants;
- It is fair to assume Freyberg's management will also fail in certain rain conditions, breaching section 107 of the Act and the NRRP;
- This application is only one of several developments that will seek to discharge stormwater into the Lansdowne Valley if encouraged by planning decisions to do so;
- Stormwater is ultimately discharged to the Halswell River and Te Waihora, and no study has been undertaken to determine their capacity to deal with cumulative effects;
- The assumptions of the modelling are unsatisfactory, in particular an impervious area of 350 m^2 per lot is too low;
- Rainwater storage tanks are susceptible to blockages and if they remain full are unfunctional;
- Given the need for inspections and maintenance it would be inappropriate to grant a 35 year duration, as the consent should only be renewed if all conditions are met;
- The pre and post development calculations are deceptive and can be distorted by changing the assumption of hard surfaces;
- It is unrealistic to consider each application in isolation without recognition of precedent and cumulative consequence to the river system and properties on the valley floor; and
- Residents of the valley understand and accept flooding issues, but consider that any addition of water will exacerbate flooding and is significant.

24. **Ms Julie McAndrew**, legal counsel, appeared for the Jordan Family Trust whom submitted in opposition to the application. Ms McAndrew presented legal

submission and called two witnesses, Mr Gerard Jordan and Mr Carl Fox. In summary Ms McAndrew made the following main points:

- Mr Jordan and his family live immediately next door to the application site on the western boundary at 274 Kennedys Bush Road and the gully into which it is proposed to discharge stormwater runs through the Jordan property;
- The Jordan property already experiences significant scouring, erosion, subsidence, and at times ponding;
- The CCC discharge below Kennedys Bush Road has in the past scoured out a deep drain in the gully and caused erosion, and although this has been re-directed it will occur again when the drain reaches capacity;
- It is acknowledged that existing problems are not caused by the applicant, however the proposal will add to and exacerbate the existing erosion problems;
- The law of natural servitude is a relevant consideration as the proposed discharge is different from how it would naturally flow onto the Jordan property and therefore they are not obliged to receive the water;
- Cumulative effects are particularly relevant given the already significant adverse effects that similar activities are having on the Jordan property;
- The proposal concentrates the discharge into one area over an much longer period of time and this will result in damage and erosion to the receiving environment that will be more than minor;
- In terms of cumulative effects this application is "the straw that will break the camel's back" leading to further erosion and impacting down the catchment and reducing amenity values of the area;
- Takahi Hill soils are not considered to be appropriate for discharging stormwater onto ground due to the tendency to develop tunnel gully and other forms of erosion that could result in instability;
- Erosion of the gully will cause sediment to be discharged else where; and
- The proposal is contrary to a number of objectives and policies of the RPS and proposed NRRP, would not achieve the purpose of the Act and must therefore be declined.

25. Ms McAndrew provided us with full copies of the case law referred to in her submission for our reference.

26. **Mr Gerard Jordan** and his family have lived on the 3.2 ha lifestyle property next to the application site since 1994. In summary, Mr Jordan made the following main points:

- Prior to the stormwater discharge from a subdivision further up Kennedys Bush Road and the installation of kerb and channel on the upper slopes of the road, the gully was a shallow swale;
- The stormwater discharge has scoured out the swale to a deep drain running the length of the property and has caused severe erosion to 50% of the length of the swale;
- Ongoing stormwater problems have increased over the last two to three years and it was found that stormwater that should have been directed into Halswell Quarry had been re-directed into the gully;
- Stormwater has now been redirected into the Halswell Quarry but when maximum capacity is reached stormwater will be directed into the gully;
- Last winter, water was blasting out of the pipe below the road, causing scouring, erosion and slumping to the land, and damage to fences and gates;
- Although the discharge point is on the applicant's site, the gully returns to the Jordan property downstream and this area is already affected by erosion; and
- On the basis of the advice of Mr Fox, the Jordan Family Trust strongly opposes the application.

27. **Mr Carl Fox**, a surveyor with 15 years experience, gave evidence for the Jordan Family Trust in relation to potential effects on the Jordan property from the proposed discharge. Mr Fox gave an oral submission and at our request later provided a written summary of his evidence. In summary, Mr Fox made the following main points:

- The existing CCC pipeline that enters the Jordan property at the north east corner (flowing into the gully) has no dissipater structure and there are obvious signs of erosion and land failure as a result of the discharge;
- The loess is relatively dispersive and easily eroded, and protection and armouring of watercourses is required;
- The proposal will result in the soils being saturated for longer periods therefore making them more susceptible to erosion during normal flows;

- When there is no formal easement for stormwater the cost of maintenance and repair of the gully would be borne solely by the landowner and this would be unfair to Mr Jordan; and
- If consent is granted the conditions of consent should include armouring/protection/planting of the watercourse invert to minimise potential erosion problems.

28. **Mr Paul Horgan**, an environmental advisor for Te Rūnanga o Ngāi Tahu, presented a submission in opposition to the application. Mr Horgan expressed concern for the Halswell River (Huritini), Te Waihora and the lowland catchment as a whole given its degraded state and inability to sustain ongoing contaminant discharges. In summary, Mr Horgan made the following main points:
    - Te Waihora and its tributaries is a taonga resource that played a key role in the mahinga kai/food gathering activities of traditional Ngai Tahu society;
    - The Waitangi Tribunal legally vested fee simple title of the bed of Te Waihora to Ngai Tahu as one of the bases of redress;
    - The proposal is at odds with the relevant objectives and policies of the statutory Joint Management Plan for Te Waihora (Ngai Tahu and the Department of Conservation) and the Te Taumutu Iwi Management Plan;
    - Because of the significance of Te Waihora and its catchment and the longstanding degradation, Ngai Tahu has adopted a policy of opposing activities that, either on their own, or in combination with other activities have the potential to further degrade the existing water quality within the lowland catchment and this development is considered to be such as activity;
    - This application will set a precedent for further similar discharge of contaminants and will result in a continuation of the incremental deterioration in water quality in lowland waterways; and
    - No further stormwater consents should be granted until a catchment wide assessment of the effects of cumulative stormwater discharges can be undertaken as part of an Integrated Catchment Management Plan.

Section 42A Report

29. **Mr Peter Christensen** tabled his section 42A report and an Addendum dated 18 November 2008, and discussed matters raised in the hearing. In summary, Mr Christensen made the following main points:

- The applicant has made three changes to the original application, Lot 12 (the existing dwelling) is now included in the application, outflow from the stormwater attenuation tanks has been reduced to 0.2 L/s, and the outlet from the stormwater system no longer contains a weir;
- Given the mitigation measures proposed any adverse effect on water quality would be less than minor;
- The engineering plans showing the depth of ponding in the raingarden to be 0.9 m and guidelines suggest a maximum depth of 0.22 m;
- The total catchment area is 100 ha and the application is 3.4% of the catchment;
- The evidence of Mr Sinclair raises doubt as to what extent the Halswell Drain affects flooding in Minson's Drain and sufficient time is need to properly evaluate the impact of this on the application;
- In light of the information presented regarding Minson's Drain it would be appropriate to seek comment from the CRC's Regional Engineer;
- It is appropriate to assume 500 m^2 per lot for impervious areas;
- The argument that more lenient co-efficients were used for the Rock Hill development is incorrect. Ms Malloch's use of a runoff coefficient of 1.0 for impervious surfaces is not conservative but rather standard practice for a 2% annual exceedance probability (AEP) event;
- It is commonly acknowledged that HIRDS version 2 underestimates peak rainfall intensities in Canterbury by about 30%, therefore the rainfall intensities used by Ms Malloch are not conservative;
- An additional 15% should be added to the rainfall intensities used to take into account climate change;
- The size of the stormwater attenuation tanks is somewhat irrelevant as flooding will last for more than 60 hours and the total volume of stormwater discharged from the site will increase;

- Given the evidence of Mr Sinclair, it is critical that the flow rate is not increased in any event and the applicant needs to demonstrate that post development flows are equal (or less than) pre development flows;
- It can be argued that any increase in the depth of flooding is small as it occurs over 25 ha, but it is impossible to predict where the additional water will spread to as the land is uneven;
- The additional water will extend the duration of flooding and it is difficult to predict how much longer it will occur for;
- The Act allows for consideration of potential cumulative effects where they are highly likely, as is the case of land zoned for residential development, but it is very difficult to quantify the effect;
- Given the evidence presented it cannot be concluded that any effect on existing flooding in the valley will be less than minor;
- Mr Sinclair's assessment of the drainage system and ultimate flow path of the proposed discharge is accurate; and
- Except for two minor matters requiring attention the improvements to the revised ESCP meet the concerns raised.

30. Mr Christensen provided the Panel with a copy of the Ministry for the Environment's "Preparing for Climate Change" (July 2008) and a discussion paper by Mr Philip Milne "When is Enough, Enough? – Dealing with cumulative effects under the Resource Management Act" (February 2008).

31. After consulting the parties, the hearing was adjourned to allow the reporting officer sufficient time to consider the evidence presented, to seek comment from CRC's Regional Engineer, and allow for a site visit to be undertaken. The matters to be addressed were outlined in a minute to proceedings (dated 18 November 2008) with notice that the hearing would be re-convened on Friday 12th December 2008.

Site Visit

32. On Monday 24th November the Hearing Panel conducted a site visit and Mr van Eeklen, Mr Christensen and Mr Sinclair accompanied us. We began at the application site and followed the flow path from the top of the gully at Kennedys

Bush Road to the Long property. We viewed drains running along the Long property, the "central pond", the pond area on the property to the south of the Long property, the culvert in Minson's Drain under the access road, the culvert and flap valve at the confluence on Minson's Drain and Jones' Creek and the confluence of Lansdowne Valley Creek with the Halswell River.

Reconvened Hearing 12th December 2008

33. Prior to resuming the hearing, a further addendum (Addendum 2) to the section 42A report dated 3 December 2008, including revised proposed conditions of consent and comment from Mr Vesey, was circulated to the parties. At the re-convened hearing, submitters in attendance were given the opportunity to present evidence relating to further addendum.

Submitter's supplementary evidence

34. Mr Rawstron questioned how sediment deposition in the drainage system would be monitored if consent is granted. He was of the opinion that erosion on his property may have been exacerbated by stock, but it had occurred because of upstream flows. He stressed that the dam on his property could not be used to mitigate water quality effects and that the applicant could not deposit sediment on his land. Mr Rawstron highlighted that further development has occurred in the catchment without any improvements being made to the drainage system and that a 3 mm increase in flood levels was totally unacceptable, particularly when over time this could be 25 mm. Mr Rawstron emphasised his commitment to finding a cross boundary solution that is fair to the applicant and accepted it would be unfair for them to wait for a grand overall plan, but remained firm that the application in its current form must be declined.

35. Mr Sintes highlighted that Mr Vesey has confirmed that the Halswell River is at its maximum capacity and will not stand any further discharges without adverse effects to the Lansdowne Valley and downstream. He suggested that Mr Vesey's evidence corroborates resident's observations and questions the adequacy of proposed water retention systems. Mr Sintes emphasised that residents are not

asking anyone for solutions, but rather that no one is permitted to make the situation worse. In conclusion, Mr Sintes stated that the time has come to stop the accumulation of ad hoc discharges into an already over loaded system and that consent be declined.

36. Mr Foster presented a submission commenting on proposed conditions of consent and emphasised that the proposed mitigation measures are liable to failure. He questioned some of the statements made by the reporting officer and stated that flood frequency and duration will increase as a result of the proposal. Mr Foster was of the opinion the Mr Vesey's report is impartial and leads to the logical conclusion that without improvements to the catchment, no further discharges should be allowed and consent must be declined.

37. Mr Long stated he was alarmed that flooding at their residence and the impact on their garden and property was not being taken seriously, and that to allow additional water to be discharged into the Lansdowne catchment would be incredibly irresponsible. He stressed that the area of land affected was 10-12 ha, with water moving over 25 ha with time, and that it is incorrect to say additional water would have a "minimal effect" when it would be the difference between 10-12 ha and 25 ha of land flooded. Mr Long voiced concern that there is no money to improve the current situation, not withstanding any additional water. He was of the opinion storage tanks would block over time and serve no purpose. In conclusion, Mr Long emphasised the need for a permanent solution and suggested that water needs to be directed to the Halswell River before it enters Minson's Drain.

38. Mr Sinclair provided us with documentation of the calculations he made of rainwater tank storage during the initial hearing, which illustrates that the tanks do not reduce flooding and presented additional evidence. Mr Sinclair was of the view that some of the land in the catchment currently zoned residential could discharge stormwater as permitted activities and therefore can be considered in any assessment of potential cumulative effects. In this regard, he was of the opinion that a 3 mm increase must be considered to be minimum figure. Mr Sinclair highlighted that Mr Vesey's evidence confirms that improvements to Minson's Drain will not be allowed unless upgrades are programmed from Lake Ellesmere

upstream. He stated the rainwater tanks would have no mitigating effect on flooding and that if effects are not fully mitigated the discharge will be the "straw that breaks the camel's back". In conclusion, Mr Sinclair stated that is not relevant whether the rise in flood levels is 2 mm or 10 mm, but that every cubic metre of water has an effect on the valley floor that cannot be mitigated.

39. In response to questions, Mr Sinclair was of the view that the Cashmere Park decision was different because the Lansdowne Valley receiving environment is more sensitive to increases than Henderson's Basin and that the effects of the proposal from the Long property to downstream can not be fully mitigated.

Section 42A reporting officer's supplementary evidence

40. **Mr Ross Vesey** tabled his supplementary information and summarised the main points. He described the Halswell Drainage District and outlined the history of drainage works from the late 1800's to present day. In relation to consideration of this application, Mr Vesey made the following points:

- CRC maintains Minson's Drain from the "central pond" to Jones, Creek and in 2006 work was undertaken to restore it to its original (1959 design) level and cross section;
- Minson's Drain is probably performing as good as is could be, but does not prevent flooding such as was experienced in July 2008;
- There is no certainty the proposal will not result in sedimentation of Minson's Drain and the applicant has not offered mitigation to the Halswell Drainage District for the cost of removing sediment which would be deposited;
- Mr Sinclair's evidence demonstrates the attenuation offered by the applicant does not fully mitigate the effect of volume and timing on Minson's Drain;
- The applicant has not offered any conditions limiting future increases to impervious surfaces;
- The Halswell Drainage system is already overloaded and additional discharges will increase the depth and/or duration of flooding;
- While the effect of any single consent application may be relatively small, partially mitigated applications add to the cumulative effects of previous additional discharges to the Halswell drainage system;

- The application will increase the volume of water discharged to Lake Ellesmere and the cumulative effect of applications increasing the volume of water discharged will result in the need for more frequent lake openings and this is not a positive outcome; and
- Any consents granted should as a minimum require the applicant to fully store and manage the discharge so it does not increase the flow regime in any manner downstream, ensure there is no scour or erosion, and hold the consent holder responsible for costs of any remedial of erosion or deposition.

41. Mr Christensen tabled his supplementary report and highlighted the following main points:
    - The waterway above the Long property is primarily affected by flow and below this point it is primarily affected by volume;
    - Use of 25,000 L storage tanks will mitigate flow peaks, but the volume of water discharged will increase by approximately 800 cubic metres (m^3);
    - If the mitigation measures proposed are undertaken any sediment discharged will be deposited on Rossendale land above the existing dam structure, and although this may not be fair (as stated by Mr Rawstron) it will mitigate any effect on downstream water quality;
    - In this situation effects of flow can be fully mitigated but, the effects of volume can not be fully mitigated;
    - Although it is difficult to quantify the effect of the additional volume, it is approximately 1% of the existing flooding and it could be concluded this is minor;
    - The is reasonable to assume some development will proceed as permitted activities and therefore the cumulative effect of additional discharges should be taken into account and Ms Malloch has carried out a basic assessment that indicates the scale;
    - In isolation the effects of this proposal (with additional mitigation) are probably less than minor, but the cumulative effect is more than minor as it does not fully mitigate the effect of the additional volume; and
    - Having taken into account the application's cumulative effect, consent should be refused.

Closing Submission by the Applicant

42. Mr Cleary informed us that we are not here to create new law, but rather are here to apply the law. He reiterated that the land is zoned for residential purposes and that the applicant and purchasers of the section have relied on the zoning. He stressed there are no realistic alternatives available and that as a discretionary activity there is no requirement to consider alternatives. Furthermore, the discretionary status of the activity is not challenged by any of the submitters.

43. Mr Cleary was of the opinion the case law cited by Ms McAndrew referring to common law rights was not relevant and in this regard provided a copy of the Environment Court's decision in the matter of the appeal of *Saunders v The Northland Regional Council* A40/98. He explained it is "physically impossible" for the proposal to exacerbate existing erosion on the Jordan property as the discharge point is below the existing erosion and Mr Fox's evidence supports the applicant's position that any erosion effects could be avoided or mitigated.

44. With regard to cumulative effects and the discussion paper by Mr Milne, Mr Cleary submitted that it is impossible to decide if future stormwater discharges would be discretionary or permitted activities and the courts specifically say don't embark on a hypothetical exercise. Furthermore, Mr Cleary submitted there is no need to fear cumulative effects if consent is required.

45. Mr Cleary submitted that in using the camel analogy, this application would not break the camel's back, but would merely give the camel a sore back for which Neurofen (in the form of mitigation measures) is offered to keep the pain at the same level. He stressed the evidence indicates any additional effects on Mr Long's property can be appropriately managed and effects on volume and duration within the wider Lansdowne Valley are negligible, and Mr Christensen supports these conclusions.

46. Mr Cleary provided the Panel with a map showing the officer's recommendations on decisions requested on amendments to the urban limits for Proposed Change No.1 to the RPS. He informed us that Mr Rawstron is seeking to increase the

urban limits to include his land and that Mr Long's principle concern is further greenfield residential development.

47. Mr Cleary submitted Ngai Tahu was not essentially opposed to this development but rather are concerned about sediment discharges into Lank Ellesmere and that the applicant's ESCP is consistent with best practice guidelines.

48. In weighing up all matters as required under section 5 of the Act, Mr Cleary submitted the Panel must consider the dire consequences for the section owners against the evidence presented by the applicant demonstrating flood effects are improved in majority of storm events, or inconsequential in others. In this regard, Mr Cleary was of the view the proposal sits comfortably with the natural hazard objectives and policies of the RPS.

49. Ms Malloch presented evidence in reply on behalf of the applicant. In summary, she made the following main points:
    - A brief search of NIWA data on rainfall in Canterbury shows Mr Long to be incorrect as the flooding referred to has occurred when rainfall has been higher than average;
    - The Van Asch (Rock Hill) development is not a significant source of new water, it has reduced the catchment contributing from the south of Kennedys Bush Road by 2.5 ha, and the kerb and channel contributes from only a short length of road;
    - Mr Long's evidence that flooding now occurs in less rainfall is misleading and may indicate issues with drain maintenance;
    - Storage tank maintenance and inspection will be required and the risk of failure is extremely minor;
    - The proposed earthworks are small and can be completed in 10 to 12 weeks in the dry summer months;
    - The stormwater quality will be higher than the existing water in the Halswell River;
    - The applicant accepts a condition restricting impervious areas to 500 m^3 per lot;

- With the unauthorised alterations to the CCC outfall remedied and the Rock Hill construction now complete, the catchment draining to the gully has been reduced;
- The erosion and scour caused by the CCC outfall are not caused by the applicant and cannot be fixed by the applicant;
- The applicant accepts the reporting officer's recommendations for the outfall structure and mitigation measures;
- It is not physically possible to re-direct water from the Rock Hill development into the gully;
- In a critical storm event, the two systems (as identified by Mr Sinclair) connect and this is the basis of the assessments;
- The information provide by NIWA to Mr Sinclair differs to the information provided to the applicant, and on the basis of this information it is not possible to conclude the 1992 storm event was a 2 to 5 year event;
- The difference between Mr Sinclair's calculations and the applicants for a 60 hour duration 2%AEP event, confirms the applicant's calculations to be more conservative;
- It would be impractical to hold water back until after the flood has gone, particularly when the effects of the proposal are shown to be minor;
- The storage tanks will reduce flooding in all events, except a 2% AEP where the increase in the depth of ponding will be 1.1 mm;
- The total catchment in a critical storm is 1000 ha not 100 ha, and the proposal is only 0.34% of the catchment;
- The runoff co-efficient used (1.0) is more conservative than standard practice;
- It is not common knowledge that HIRSDS2 data under estimates Christchurch rainfall by 30%, however work done by CCC shows its WWDG data over estimates and therefore climate change is taken into account;
- The reporting officer is incorrect in directing use of the middle column in Appendix E because after 60 hours there would be outflow of ponded water;
- The estimated time of extra ponding in a 2% AEP event is 1-2 days depending on infiltration and evaporation; and

- The considerable evidence produced shows the effect of this small discharge will be very minor and given the proposed mitigation is very likely to have positive effects for the most frequent storms.

ASSESSMENT

50. We have taken considerable time and care to summarise the evidence presented, and in doing so will not repeat all the points made in our evaluation. Our assessment focuses on the central issues raised regarding water quality and water quantity issues and the pivotal points of difference in the evidence presented.

52. In making our assessment, we have considered the original application and assessment of environmental effects, all further information provided in response to section 92 requests, the section 42A report and addendums, all submissions received and all the evidence presented at the hearing.

Status of the Applications

53. The starting point for our assessment is to determine the status of the proposed stormwater discharges. There is agreement between Mr Christensen and the applicant that the proposal should be considered as a discretionary activity under Rule WQL56, and as pointed out be Mr Cleary, this has not been challenged by the submitters.

54. Notwithstanding the evidence presented we are required to consider the conditions of Rule WQL56, and we are not satisfied the activity complies with all the conditions and remain unconvinced that the activity should be considered to be a discretionary activity rather than as a non-complying activity under Rule WQL60.

55. Rule WQL56 condition (3) states: "The discharge shall be directly into water of a river or lake". We are of the view that point of discharge is not into the invert of the gully and is onto land. We therefore do not accept the activity complies with condition (3). Ms Harte identified the difficulty with the complexity of Rule WQL56 and as a precaution assessed the activity as both a discretionary activity and a non-complying activity.

56. We note Ms Harte's comments regarding the wording of the proposed NRRP provisions, but accept our obligation to consider the application against the provisions as they are currently worded and acknowledge we have no discretion to disregard the classification of the activity under a proposed plan. Whether we consider the activity *should* be classified as a discretionary activity or not, does not change the wording of the rule. We are required to make an overall assessment of the proposal and are of the view that we should take a conservative approach and consider the proposal as a **non-complying activity** under Rule WQL60.

57. In terms of our responsibilities for giving consideration to an application for a discharge permit for a non-complying activity, we are required to have regard to the matters listed in sections 104, 104B, 104D, 105 and 107 of the Act.

58. Specifically, under sections 104B and 104D, where an applicant has sought consent for a non-complying activity, we may grant or refuse resource consent, and (if granted) may impose conditions under section 108. However, we are limited in that resource consent may only grant a for a non-complying activity if we are satisfied that **either**:

    (a) the adverse effects on the environment (other than any effect to which section 104(3)(b) applies), will be minor; **or**

    (b) the application is for an activity that will not be contrary to the objectives and policies of the relevant plans.

59. For non-complying activities, even where one or both of the threshold tests in section 104D(1) is met, we still retain an overall discretion as to whether to grant resource consent. That discretion is to be exercised having regard to the criteria set out in section 104. In that respect, and subject to Part 2 of the Act, which contains the Act's purpose and principles, we are able to have regard to:

    (a) Any actual and potential effects on the environment of allowing the activity; and

    (b) Any relevant provisions of a national policy statement, New Zealand coastal policy statement, regional policy statement, plan or proposed plan; and

(c) Any other matters the consent authority considers relevant and reasonably necessary to determine the application.

60. In terms of section 105, when considering a section 15 (discharges) matter, we are required to have regard to:

(a) The nature of the discharge and the sensitivity of the receiving environment to adverse effects; and

(b) The applicant's reason for the proposed choice; and

(c) Any possible alternative methods of discharge, including discharge to any receiving environment.

61. Contrary to the submission of Mr Cleary, we are of the view that regardless of status of the activity, section 105 applies to all section 15 matters and the applicant is required to consider possible methods of discharge.

62. In terms of section 107, we are prevented from granting a discharge permit allowing any discharge into a receiving environment which would, after reasonable mixing, give rise to any of the effects set out in section 107(1)(c)-(g).

Actual and Potential Effects on the Environment

63. We have considered all submissions to the application and the issues and concerns raised have been accurately summarised in the section 42A report. In having regard to the evidence before us, it is apparent that we can focus our assessment of actual and potential adverse effects of the proposed stormwater discharges on water quality and quantity in the receiving environment.

64. The gully has an ephemeral watercourse, which has no base flow and flows intermittently after rainfall, with highly variable flow rates. We note that water quality and water quantity in the receiving waters has not been tested or measured, but that there is general agreement that given the soils there would be silt loam loess in suspension. Given the absence of base flow and the modified nature of the watercourses in the drainage system, we accept aquatic values would be limited.

65. The wider receiving environment of the Lansdowne Valley is subject to flooding All parties acknowledge and accept there are existing drainage problems primarily related to the flatness of the land and restricted capacity of the drainage system and the Halswell River. No one disputes the drainage system is complex and all agree the relative height of the Halswell River and Lake Ellesmere/Te Waihora have some effect on existing flooding problems.

Adverse Effects on Erosion and Scour

66. In considering the existing environment, we are of the view that any scour or erosion caused by the CCC outfall, upstream of the discharge point is not relevant to our consideration of the potential effects of this application.

67. In relation to the existing erosion and scour downstream of the discharge point, we accept the expert evidence of Ms Malloch, Mr Fox and Mr Christensen that any adverse effects of the discharge can be adequately avoided or mitigated by implementing appropriate armouring/protection/planting of the gully's invert and that the proposed dissipating structure would adequately reduce water velocity. However, we are of the opinion that the discharge point should be moved as close to the invert of the gully as possible to mitigate any potential erosion effects on the sloping bank.

68. Although we acknowledge the discharge will result in the flow path being wetter for longer, we consider potential adverse effects on erosion and scour on the Jordan's property could be adequately avoided, remedied or mitigated by use of a dissipater structure at the point of discharge and the imposition of appropriate additional consent conditions requiring the armouring/protection/planting of the gully invert and maintenance of this.

Adverse effects on water quality

69. In terms of section 105 of the Act, we are of the view that water quality in the receiving waters would be relatively low during periods of rain and that the Halswell (Huritini) River does not currently meet the relevant water quality standards[1]. In this regard the sensitivity of the receiving environment could be considered to be low. However, because the ultimate receiving environment is Lake Ellesmere/Te Waihora, we concur with Mr Horgan that it is sensitive to contamination. The potential effect of sediment discharges from a range of sources on water quality in Lake Ellesmere/Te Waihora is clearly illustrated in the satellite photograph provided by Mr Sinte, which shows silt laden water discharging from the Halswell River into Lake Ellesmere/Te Waihora. We note Mr Vesey's evidence that sediment deposited in the Halswell drainage system, including Minson's Drain has to be removed to maintain the system's capacity and the costs of this and sediment disposal can be significant.

70. During the **construction or development phase** the greatest potential risk to water quality in the receiving environment is from sediment contamination from uncontrolled site runoff or inadequate water treatment.

71. To avoid or mitigate any potential effects during this phase the applicant proposes the following measures:

- Minimising disturbances of vegetation and soils;
- Rapidly re-vegetating disturbed areas;
- Limiting cut depths to 1.5 m and volumes to 1,000 m^3;
- Stabilising stormwater discharge points with rock;
- Constructing a clean water diversion bund above the site;
- Constructing a decanting earth bund;
- Daily reviews and weekly inspections of erosion and sediment control measures;

[1] [1] Section 2.4 Class Lowland in Schedule WQL 1 Proposed NRRP Chapter 5 Water Quality.

- Utilising silt fences; and
- Undertaking bulk earthworks (including vegetation removal) between December and April.

72. The applicant has provided more detail on how these measures will be implemented in the revised ESCP and consent conditions have been suggested to give effect to these requirements. The reposting officer has note that controls have not been provided and are needed for the stormwater service trench to be formed below the right of way and silt fence.

73. Given the relatively small scale of earthworks and the mitigation proposed by the applicant to avoid and minimise sediment contamination, we concluded that while the discharge of stormwater may add to the existing sediment load in the Halswell River after rain, the discharge from the site is unlikely to give rise to any of the effects set out in section 107(1)(c)-(f). No ecological evidence was provided to establish that any significant adverse effects on aquatic life (section 107(1)(g) would occur. With an emphasis on regular inspection and maintenance of erosion and sediment control measures, we are of the view the risk to the receiving environment from uncontrolled sediment runoff is low. We accept the mitigation measure proposed meet current best practise standards. We also agree with Mr Christensen that the existing dam structure will mitigate any effect on downstream water quality, as any suspended sediment is likely to be deposited there. We note the applicant has not offered any mitigation to address deposition on Rossendale land.

74. With regard to potential adverse effects on water quality in the receiving environment **post development**, the contaminants of greatest concern are suspended sediment, oxygen demanding substances, hydrocarbons, toxic organic substances and pathogens. It is well recognised that most of these contaminants are discharged into the receiving waters during the first flush of rain.

75. The applicant is proposing to treat approximately two times the required first flush (25 mm of rainfall) volume by directing it into a raingarden. This is considered to in line with best practice options and allows for the treatment of contaminants through infiltration soil/sand medium at the base before discharge to the piped system. Mr Christensen agrees with the applicant that the proposed method of stormwater

treatment meets current best practice standards and (with minor changes to the depth) is likely to result in a high level of treatment by removing of most of the contaminants into the sand/soil media.

76. On the basis of the evidence presented, we accept that the level of treatment proposed is consistent with recognised standards and best practice. The mitigation measures proposed by the applicant to avoid or mitigate potential adverse effects on water quality have been encapsulated in the proposed conditions of consent. We are satisfied that given the detail provided in the revised ESCP and the standard of treatment proposed, that the proposed discharges are unlikely to have more than a minor effect on water quality in the receiving environment and in particular, Te Waihora/Lake Ellesmere.

Adverse effects on existing flooding

77. In terms of section 105, the drainage system of the Lansdowne Valley and the Halswell River must be regarded as highly sensitive to any increase in water quantity. All parties to the hearing acknowledge existing flooding issues and the numerous photographs tabled clearly illustrate the frequency and extent of the problem. The main issue between the parties is whether the proposed discharges will cause extra flooding and flood damage, in frequency, extent and/or duration.

78. In examining the evidence we note there is general agreement amongst the experts regarding the accuracy of the calculations undertaken, but that the key point of difference is whether the assessments should be viewed as conservative and whether the increase in flood levels indicated is significant.

79. The applicant maintains the assessments are "extremely conservative" and therefore represent the worst possible increase in stormwater volume. Mr Sinclair and Mr Christensen disagree viewing the assessments as reasonably indicative. We have considered the reasons for and against their positions and accept the opinion of Mr Sinclair that we should consider 3 mm to be the minimum potential increase in flood levels, rather than the 1.5 mm (using 25,000 L storage tanks) to 2.2 mm (using 9,000 L storage tanks) posited by Ms Malloch.

80. The applicant's position is that any increase in this order would be "indiscernible" and Mr Cleary directed us to the Cashmere Park case where the Environment Court considered a 2 mm increase in Henderson's Basin to be less than minor.

81. Mr Sinclair was of the view that it was not the increase in level that is significant but rather the extra time it would take to drain away, thus extending the duration of flooding that was significant.

82. Mr Christensen suggested that although it could be concluded that an increase of 3 mm was minor, the additional water would not be spread evenly over the 25 ha susceptible area and it is therefore impossible to predict what and where the effect of the increase would be and its duration.

83. In considering the potential effect of a 3 mm increase, Mr Clearly is correct the Act is not a "no effects" statute. However, in our opinion (and that of the submitters) a "minor effect" of increasing flood levels by 3 mm may well be the difference between the Long's residence flooding, their pasture and plants dying, or whether their driveway is impassable. We do not know for certain, but the evidence is clear flooding will increase in both extent (3500 m^2) and duration (at least 2-3 days). We consider this to be significant to the residents in the valley and more than a minor effect.

84. In having regard to the evidence before us, it is clear that the proposal will increase the volume of water discharged into the Lansdowne Valley when the drainage system there is already overflowing. While the storage tanks should discharge after the storm peak, the discharge will occur when the valley floor is flooded.

85. We note Mr Vesey's evidence that the Halswell drainage system was designed to drain and control groundwater flows rather than to remove surface flows or for flood protection. There was no evidence contradicting Mr Vesey's statement that the system "does not have the capacity to accept increased stormwater volumes of water without adversely affecting its performance and adding to the already present flooding experienced by landowners in the catchment". Given the storage tanks will discharge in less than one day, we agree with Mr Sinclair and Mr Christensen that in terms of mitigating effects on existing flooding, in storm events longer than 21 hours the tanks provide no mitigation.

86. Overall we are not satisfied that given the existing environment, and the mitigation measures proposed by the applicant, that the proposed discharges will have only a minor effect on existing flooding in the receiving stormwater systems.

Cumulative Effects

87. The has been considerable discussion about the cumulative effect of this proposal on flooding in the wider receiving environment and we have spent a lot of time considering whether it is appropriate to consider the potential stormwater discharges from the 8.4% of land in the upper catchment zoned residential (some 72-100 houses) that is yet to be developed. We agree it is difficult to know whether some of these potential discharges will occur as permitted activities or whether resource consent will be required. Although we tend to agree with Mr Sinclair and Mr Christensen that we could consider the cumulative effect of residential land in the catchment and a resulting potential cumulative increase in ponding depths in the order of 16-25 mm, this has not been the basis of our determination.

88. Mr Cleary has emphasised that we should have comfort in the knowledge that given CRC's position, resource consents will be required for all discharges. We are not so certain. But if we accept resource consents will be required, we are of the view that it is critical that each application is required to fully mitigate any potential effect by not increasing flood levels on the valley at all. To allow each development to only partially mitigate any effect on flood levels would result in significant cumulative impacts on the valley floor.

Relevant Planning Provisions

89. An analysis of the relevant objectives and policies of the **Regional Policy Statement** (RPS) was provided in the Section 42A report by Mr Christensen. We note of particular relevance Chapter 5 Tangata Whenua, Objective 3 and Policy 9 of Chapter 9 Water, Objective 1 and Policy 2 of Chapter 12 Settlement and the Built Environment, and Objective 1, Policy 3 and Policy 4 of Chapter 16 Natural Hazards.

90. We note the particular relevance of the provisions of the Natural Hazards chapter and the direction to give priority to the principle of avoidance. We prefer the evidence of Mr Sinclair that indicates the potential for this proposal to increase flooding both in extent and duration and agree any additional water discharged at a time when the drainage system is flooded will *increase* any effect on people and their property.

91. Overall, given the above assessment of potential environmental effects, we consider the proposed discharge is likely to be consistent with the water quality provisions of the RPS, but not the natural hazard provisions. In particular,

92. The **Transitional Regional Plan** (TRP) provides little guidance and in effect the general provisions of section 104 of the Act overtake the plan. There are no objectives or policies of relevance to our assessment.

93. Mr Christensen and Ms Harte have provided us with an analysis of the relevant objectives and policies of the proposed **Natural Resources Regional Plan** (NNRP) and drew our attention to Objective WQL1 and Policy WQL1 of Chapter 4. Given the above assessment of potential environmental effects, we consider that with the imposition of appropriate consent conditions the proposed discharges are likely to be consistent with the provisions of Chapter 4. We note the NRRP does not address natural hazards such as flooding.

94. The Act requires us to make an overall assessment of the proposal against the relevant objectives and polices of the RPS and NRRP. In having regard to the evidence before us, we consider the proposed discharge will exacerbate flooding and will be contrary to Policy 3 and 4 of the RPS.

Other Matters

95. Mr Christensen drew our attention to other recent stormwater discharge permits discharging stormwater into the wider Lansdowne Valley catchment.

96. Submitters have raised the issue of precedent and are concerned the granting of consent could encourage other developers. In this regard, we are of the view that if it was considered acceptable for this proposal to increase flood levels by 3 mm other applications would be encouraged to only partially mitigate effects and the cumulative effect would be significant.

Part 2 of the Resource Management Act 1991

97. In accordance with Part 2 of the Act, we consider that the proposal will increase the volume of stormwater discharged into a receiving environment that is already subject to relatively frequent and significant flooding. The submitters are all longstanding residents who have a long history of managing and living with flooding in the valley, and we acknowledged their plea to not allow their situation to be worsened.

98. In balancing the current residents concerns with the desire of the applicant and future residents to dispose of their stormwater, we are of the view that it would not be consistent with the principles of the sustainable management of natural and physical resources, as defined in section 5, to allow the activity to occur without full mitigation of potential flooding effects. Whether full mitigation is possible within the restrictions of the site and the existing catchment, is not the issue, protection of the environment (including people and their well being) is.

99. We are strongly of the view that use and development of the Lansdowne Valley's upper catchment, for people's social and economic wellbeing, must not come at a cost to the economic and social wellbeing of the existing residents in the lower valley.

100. In recognising and providing for matters of national importance contained in section 6 of the Act, we note the relevance of section 6(e) regarding the relationship of Maori and their culture and traditions with ancestral lands, water, sites, waahi tapu and other taonga. Clearly, Lake Ellesmere/Te Waihora is a significant taonga and any additional stormwater may have a cumulative effect on the quantity of water in the Lake and the frequency of artificial openings to drain it to the sea.

101. In having particular regard to section 7 matters, we note the particular relevance of section 7(a), (g), and (i). Ngai Tahu is kaitiakitangi of Lake Ellesmere/Te Waihora and we have had particular regard to their concerns. CRC and submitters agree that the capacity of the Halswell drainage system (as it exists without catchment wide improvements) is limited and that its capacity to receive additional volumes of stormwater has been reached and exceeded. We are of the view that in having particular regard to climate change effects and the possibility of more intense storm events, flooding in the receiving environment is likely to more frequent and more significant.

102. In forming our opinion, section 8 requires us to take into account the principles of the Treaty of Waitangi (Te Tiriti O Waitangi). We have a clear submission from Ngai Tahu and with regard to their concern about additional volume of water being discharged to Lake Ellesmere/Te Waihora we are obliged to protect their taonga resources.

Summary

103. The evidence before us supports the view that any potential environmental effects of the proposed activity on water quality are likely to be less than minor, but that any potential effects on flooding in the receiving environment are likely to be more than minor. In considering the relevant objectives and policies regarding natural hazards, we are of the opinion that the proposal will exacerbate flooding (both in extent and duration) and would therefore be contrary to the relevant policies of the RPS.

104. It is our overall judgement, that resource consent application for **Discharge Permit CRC074090** fails both threshold tests set out in section 104D, and that the purpose and principles of the Act can be best achieved by refusing consent.

105. Given the difficulties with interpreting Rule WQL 56, we record that we would have reached the same determination if we had considered the application to be a discretionary activity.

Decision

It is the decision of the Canterbury Regional Council, pursuant to s104, s104B, s104D, s105 s107 and s108, and subject to Part 2 of the Resource Management Act 1991, that resource consent application CRC074090 by Freyberg Developments Limited be refused.

Dated at Christchurch this 16th day of February 2009

S A McGARRY
Commissioner and Chair