

**IN THE MATTER OF**  
The Resource Management Act  
1991

**AND**

**IN THE MATTER OF**  
Proposed Plan Change 62 to the  
Selwyn District Plan

**JOINT STATEMENT**  
  
**of the**  
  
**HARTS CREEK STREAMCARE GROUP**  
  
**and**  
  
**ELLESMERE SUSTAINABLE AGRICULTURE INCORPORATED**

7 September 2020

## 1. INTRODUCTION

- 1.1 This joint statement is provided in support of submissions and further submissions lodged on Proposed Plan Change 62 (hereafter referred to as 'PPC62') to the Selwyn District Plan (hereafter referred to as 'SDP') by the Harts Creek Streamcare Group and Ellesmere Sustainable Agriculture Incorporated (hereafter referred to as 'the submitters').
- 1.2 The submitters have read the application documentation, the Section 42A Officer Report and associated reports, and the expert evidence provided by the applicant. The submitters would like to express that they do not fundamentally oppose further residential development in Leeston. However, they are concerned specifically with any potential adverse environmental effects on surface water and groundwater quality and quantity down gradient and downstream of Leeston Township and other townships within the Ellesmere area.
- 1.3 Any queries regarding this statement can be directed to the author, Carey Barnett<sup>1</sup>, in the first instance. The statement has been reviewed by the members of the committees of the respective submitter groups and provides a joint representation of their collective views.

## 2. BACKGROUND OF THE SUBMITTERS

### *Harts Creek Streamcare Group (HCSCG) - Submitter and further submitter*

- 2.1 The Harts Creek Streamcare Group consists of a committee of landholders that border Birdlings Brook and Harts Creek. The Committee was established in the mid 1990's with their vision being to restore the riparian margins and surface water quality and quantity of the lowland streams that ultimately flow into Te Waihora/Lake Ellesmere. Over the years the group has facilitated numerous restoration projects, liaised with landholders, organised riparian projects and funding applications, project management, and worked closely with the supporting partners of Environment Canterbury (ECan), Department of Conservation, Te Waihora Trust and Te Taumutu Runanga. There has also been some engagement with Selwyn District Council. **Annexure A** illustrates the location of the two lowland streams and the areas where work has been carried out and continues to be undertaken.
- 2.2 There has been extensive riparian restoration completed in this catchment in the order of several hundreds of thousands of dollars. The catchment project serves as a renowned example New Zealand-wide as to what can be achieved through constructive and concerted efforts via non-regulatory mechanism. An informative film on the Harts Creek/Birdlings Brook Project can be viewed at <https://www.youtube.com/watch?v=NGo1vCaaGW8>. A further \$60,000 funding block was approved in September 2020 for three years of clearing and planting projects via the Immediate Steps Programme under the umbrella of the Selwyn Waihora Zone Committee.
- 2.3 This is the first time that this group has submitted on any proposal within a policy or consenting framework. The group generally focuses on non-regulatory 'on-the-ground' improvements. However, in this instance the proposed re-zoning has the potential to have significant adverse

---

<sup>1</sup> Carey Barnett has previously been employed as an Environmental Planner – Team Leader Consent Planning at Selwyn District Council (four years at SDC including policy planning) and nine years as Senior Planner and Principal at Boffa Miskell Limited.

impacts on both the water quality and quantity within these streams and the restoration of them. A fundamental key concern of this group is protection and enhancement of these waterways and ensuring all activities affecting them do so in a positive manner and do not detract from the improvement that has and continues to occur. The group lodged a late submission but considers that this has not fundamentally put the applicants at a disadvantage and requests that the submission be accepted for consideration subject to Section 37A of the Resource Management Act. Regardless of this, the group has lodged further submissions raising the same points.

- 2.4 The Harts Creek Streamcare Group Committee currently consists of the following Lakeside landholders and interested parties: Mr John Legg (Chairperson), Mrs Carey Barnett (Secretary/Treasurer), Mr Stu McLachlan, Mr Peter Chamberlain, Mr George Chamberlain and Mr Bryan Gilchrist.

***Ellesmere Sustainable Agriculture Incorporated (ESAI) - Further Submitter***

- 2.5 Ellesmere Sustainable Agriculture Incorporated (ESAI) is made up of approximately 112 farming members located between the Rakaia and Selwyn/Waikirikiriri Rivers and east of State Highway 1 to the east coast of the Selwyn District. It encompasses the rural areas known as Irwell, Brookside, Doyleston, Leeston, Lakeside, Sedgemere, Southbridge, Killinchy and Little Rakaia, which are commonly referred to collectively and in this context as 'Ellesmere'. **Annexure B** attached illustrates the location of this area.
- 2.6 ESAI was officially formed in 2009 in order to provide a collective representation on water related issues, predominantly in respect to irrigation and the protection and maintenance of the water resource; both ground and surface water. In 2016 ESAI widened its representation to include other areas of concern to agriculture and the environment beyond those strictly relating to water.
- 2.7 Since 2009 ESAI has worked closely with Environment Canterbury (ECan), Selwyn District Council (SDC), the Ministry for Primary Industries and various other stakeholders including: the Foundation for Arable Research; Irrigation NZ; DairyNZ; and, Horticulture NZ to inform and assist in the development of relevant, practical, efficient and effective regulation. ESAI has been involved in 'ground-truthing' Good Management Practices that now form part of Farm Environment Plans (FEP), assessing the implementation and practical auditing of FEPs and holding farm field seminars to inform farmers, ECan Councillors and Auditors about recognised and appropriate farm management practices. The group has also been liaising with the planning staff of SDC in relation to new draft provisions proposed for release in the revision of the District Plan. ESAI has been recognised as a key stakeholder in this process. Members also assist with Sustainable Farming Fund projects which trial new ways of improving environmental outcomes from farm practices and environmental treatments.
- 2.8 This group has been proactive in forging positive and informative relationships with a variety of entities and has long been supportive of the facilitation offered through the forming of the ECan Zone teams that now operate in the various catchments throughout the Canterbury region (ours being the Selwyn Waihora Zone). ESAI was also highly supportive of the appointment of a Cultural Land Advisor and jointly promoted the first 'Shed Talks - Understanding Mahinga Kai' seminar in conjunction with ECan held at Tim Chamberlain's property along the banks of Harts

Creek in 2018. This was coincidentally timed when ESAI was contemplating appointing its own Cultural Advisor.

- 2.9 In addition to the core work of ESAI, the group has firm connections to two other agricultural groups that have a strong positive environmental focus which also operate in the Ellesmere area. These are the aforementioned Harts Creek Streamcare Group and Quorum Sense (a Regenerative Agriculture group focused on practicing and educating on the benefits of this biological farming type). These entities are also continuously undertaking projects and promotions to improve farming systems and recognise the importance of environmental protection, especially in respect to lowland stream protection and enhancement. ESAI has recently been granted a \$2.2 million funding package from the Ministry for Primary Industries to undertake further riparian enhancement projects in the Ellesmere area - an exciting opportunity to provide further on-ground environmental improvement and engage further with landholders and key stakeholders such as ECan and SDC. This funding package is considered the stepping stone to creating outstanding outcomes for our lowland streams and will include additional investment and commitment from adjoining landholders. This project also includes a regime of water quality testing and analysis at the headwaters of 14 Ellesmere lowland streams to provide a basis for future benchmarking and testing that will assist future monitoring programmes, potentially in conjunction with ECan.
- 2.10 Members of ESAI are predominantly 'family farmers'. They are farmers who have owned and managed the same property for several generations and have a natural affinity to the land, its use and its protection. Traditionally these types of farmers have engaged in long-term farming practices that utilise environmentally sustainable farming systems. They perceive farming as a long-term plan to retain their heritage and livelihood so that it can be progressed through future generations. A key characteristic of the family farmer is operating in an efficient and caring manner with strong environmental ethics and stewardship. Family farms are predominantly financed through production from the farm itself and are not subject to many off-farm shareholders or corporate investment. Finance and production is very carefully managed. Inefficient use of fertiliser or water is considered costly and used sparingly under stringent and precise management and application systems. Historically, the family farmer cares greatly for their farm, its produce, livestock and surrounding environs. They have high level expertise and acquired local knowledge which is vastly comprehensive. The farm is seen as not only an asset to the owner but also to the community and its immediate physical and social environment; all of which it aims to protect and maintain to its highest quality. These farms are also subject to a host of regulatory provisions ensuring their practices are environmentally sound and in the majority of cases allowed to operate by way of a resource consent to farm under the provisions of the Canterbury Land and Water Regional Plan.
- 2.11 Agriculture in the Canterbury region contributes substantially to New Zealand's overall production, and as a consequence the economic viability of the country as a whole. Ellesmere and Leeston are an intrinsic part of this economy. The area includes a variety of agricultural land uses such as arable (wheat, barley, ryegrass, clover, small seed such as radish, carrot, kale), dairy, vegetables for market, blackcurrant and berry crops, sheep and beef. All of these uses require sustainable farming and environmental practices, which includes waterway protection and environmental responsibility. Leeston Township is an important connection for and is an integral part of the agricultural economy and community in this area. Many of the rural families

have family living in the township and also take part in leading, being members of or contributing to the organisations associated with it.

- 2.12 The ESAI Committee presently consists of eight elected members: Mr Tim Chamberlain - Chairman; Mr Nigel Greenwood - Vice Chairman, Mr David Birkett - Treasurer, Mr Craig Croft - Secretary, Ms Jo Jermyn Benny - Publicity Officer and Project Development, Mr Simon Osborne, Mr Stuart McPherson, Mr Stuart Macaulay. Mrs Carey Barnett is the Environmental Advisor to this Committee.

### **3. SUBMISSIONS**

- 3.1 In summary the submission and further submissions of The Harts Creek Streamcare Group and Ellesmere Sustainable Agriculture Incorporated consisted of the following concerns:

1. That HCSCG had not been consulted during any consultation phase of the re-zoning proposal;
2. PPC62 has the potential to increase adverse effects on surface quality and quantity in Birdlings Brook and Harts Creek. The proposal has not adequately addressed significant potential adverse effects on the environment and how they might be avoided, remedied and/or mitigated;
3. PPC62 may result in increased adverse effects on groundwater quantity and quality downgradient of the land proposed to be re-zoned.
4. No further degradation of water quality in these streams and ultimately Lake Ellesmere/Te Waihora are acceptable. There is scientific analysis available that recognises the significant adverse impact that increased urbanisation has on water quality and quantity. It is not appropriate to address such matters at the time of subdivision.
5. That PPC62 be declined in its entirety, or alternatively, approve only part of the proposed re-zoning area to ensure adverse effects on Birdlings Brook and Harts Creek are completely avoided.

### **4. POST SUBMISSION CONSULTATION**

- 4.1 The submitters are not aware of any consultation with any parties beyond the township or the proposed re-zoning area during the investigation or post lodgement phases prior to notification of this proposal by the applicants' representatives or the Council. A meeting and or a formal pre-hearing meeting was requested by the submitters. A request to the Council for a formal pre-hearing meeting was declined but a meeting with Council staff and representatives of the applicants was undertaken with a representation from HCSCG and ESAI. This meeting took place in Leeston on 14 July 2020 and provided an understanding of the matters of issue. The Baseline Group representatives who were present were to provide an illustration of where runoff from the subject land was to flow in relation to the various stormwater catchments in August. This

has not been provided to date although some further information has been provided in the expert evidence lodged on behalf of the applicants for consideration at the hearing.

## **5. POTENTIAL ADVERSE ENVIRONMENTAL EFFECTS**

5.1 As mentioned above, the submitters are primarily concerned with the potential for PPC62 to result in adverse environmental effects on surface and ground water quantity and quality. These will be addressed under the following headings:

1. The potential increase in contaminants including copper and zinc entering Birdlings Brook and Leeston Creek and aquifers; and
2. Flooding and/or raised water levels in Birdlings Brook; and
3. The potential increase in adverse downgradient effects emanating from the upgraded Leeston Stormwater North Bypass development.

5.2 These concerns are explained and addressed below and are an appropriate consideration under the provisions of Section 76(3) of the Resource Management Act 1991. The submitters are committed to adhering to the principles of Te Mana O te Wai as the integrated and holistic well-being of the water as prescribed in the Freshwater National Policy Statement.

### ***Potential Increase of Contaminants to Surface and Ground Water***

5.3 There is no ecological assessment provided as part of the application documentation and the impact that contaminants from urban development including copper and zinc may have on either Birdlings Brook (which ends at its confluence with Harts Creek in Lakeside), Leeston Creek or underground aquifers. It is noted that in Mr James Hopkins' evidence, on behalf of the applicants, detail is provided that compares contaminants emanating from rural and residential land use. The submitters recognise that all land uses can result in impacts on natural water systems. This is not disputed. However, what is key is the extent of any future impact and whether this would be further detrimental to the water quality of relevant natural water bodies. It is also understood that ultimately if PPC62 was approved, that the provisions of the Canterbury Land and Water Plan stormwater disposal rules, objectives and policies would apply and would assess any proposal accordingly in relation to the proposed stormwater disposal design, its effects and management plan.

5.4 All of the Ellesmere surface waterbodies contain habitat for a wide variety of biota that are both introduced and native such as trout and eels and numerous species of native flora and fauna. In order to gain some insight into what level of contamination already exists in the area the submitters looked towards the information contained in the application for resource consent to legalise the disposal of stormwater from Leeston Township (CRC186175).

5.5 Resource consent application CRC186175 to ECan was lodged by the Selwyn District Council in 2018 as part of a suite of consent applications to gain global consent/s for stormwater discharge across many of the townships within the Selwyn District. It is understood they are required to legitimise an historical void where no discharge or only some stormwater discharge consents

were in place in some townships. ECan has confirmed that there does not currently appear to be a consent for stormwater disposal for Leeston Township.<sup>2</sup> The application is currently on hold pending the requirement to provide further information relating to an array of matters. This application for Leeston appears to relate only to the existing township area and only includes some of the area subject to this re-zoning proposal. However, the current deferred zone areas are contained in the consent application's associated Leeston Stormwater Management Plan 2017, the Network Discharge Consent boundary attached to the Assessment of Environmental Effects (AEE) only contains mainly the existing non-deferred zonings. It is not clear currently the extent of the areas to be included in the consent area.

- 5.6 The AEE attached to this application provides an initial analysis of the current state of Birdlings Brook near the re-zoning site. It also provides information on Leeston Creek. This information has been provided by Jacobs and highlights the following:

*"As part of the application, wet weather sampling of Leeston Creek and Birdling Brooks[sic] was undertaken in October 2017. In summary, TSS [total suspended solids] and total phosphorus in Leeston Creek increased downstream of the townships discharges, whilst all other parameters were in generally similar concentrations upstream and downstream, noting that copper and zinc were above guideline values both upstream and downstream of the cumulative town inputs. Birdling[sic] Brook had low TSS and broadly similar results for other parameters, excluding dissolved zinc and copper which were above guideline values both upstream and downstream of the discharge point with higher concentrations observed downstream."*

(Page 51 of Jacobs resource consent application for SDC Leeston Stormwater)

A copy of the Water Quality and Ecology Technical Report by Jacobs provided with the AEE is attached in **Annexure C**. It shows that there are considerable exceedances of the guidelines under the provisions of the Canterbury Land and Water Regional Plan (see Tables 17 and 18 on page 42 of the Annexure C).

- 5.7 This gives a clear indication that copper and zinc concentrations are higher below the existing township residential areas in Birdlings Brook. It also showed that phosphorus levels increased downstream of the township in Leeston Creek. All of these contaminants should be avoided from entering waterways to protect aquatic and human life. They can be significantly detrimental to fauna and human health.
- 5.8 The AEE goes on further to advise that stormwater discharge may be having some effect on the water quality of these streams but that the ecology would be more affected by intermittent flows. This statement is significantly inconsistent with the experiences of the landholders immediately adjacent to Birdlings Brook.
- 5.9 The Oxford Dictionary defines 'intermittent' as 'irregular'. While Birdlings Brook does undergo seasonal changes in flow largely due to weather events and the loss of spring pressure caused by over allocation of groundwater in the upper catchment (although this is should be diminishing as a result of the Central Plains Water Scheme), it remains a reliable spring fed stream that is only known to have had a short reach go dry below the township in 2017. 2017 was the year that the

---

<sup>2</sup> Email confirmation received from Sam Leonard – Environment Canterbury 1/9/20

Selwyn River went dry at Coes Ford and the Canterbury Plains had suffered a significant period of drought. Of the historic knowledge from the family farming landholders in this area, none had experienced irregular flows in this waterway. Seasonal changes are normal but suggesting Birdlings Brook has an intermittent flow may be unjustified. In addition, it is noted that the sampling undertaken in the ecological report was done during the significant drought period of the summer of 2017. It is considered that this is not a representative observation of the flow in Birdlings Brook.

5.10 Resource consent application CRC186175 is on hold pending the provision of substantial further information relating to:

1. Extra site inclusions given that further development might occur in the district before the 2025 date when the consent will apply from, including high risk sites;
2. Hazard assessment including flooding and changes from 'greenfield' areas to urban;
3. Surface water and ecology effects;
4. Groundwater effects;
5. Monitoring programmes;
6. Tangata Whenua Values.

5.11 The Section 92 request for further information is attached in **Annexure D**. It specifies information required relating to surface water and ecological effects in the Doyleston and Leeston townships. It highlights that the existing assessment contains inaccuracies and is insufficient in order to assess any effects on the receiving environment. Specifically in relation to Leeston, it is noted that copper and zinc levels in the Leeston Lake Road, Chapman and Beethams Drains already exceed the Canterbury Land and Water Regional Plan Schedule 5 Water Quality Standards when the right thresholds are applied (C(2)(b)(iv)). At point C(2)(b)(viii) the Processing Officer also queries "the assumption that Leeston Creek and Birdlings Brook only flow during wet-weather". Birdlings Brook is not known to run dry below the Harmans Road and Feredays Road intersection at all unless in extreme drought periods like 2017. Being a spring fed stream it has a reasonably regular flow albeit subject to the normal seasonal variations that all surface waterbodies in this area are characterised by. The request for further information also queries effects on groundwater quality.

5.12 PPC62 proposes a large stormwater management area or a series of management areas within the Outline Development Plan (ODP) to deal with stormwater runoff. Given that there are already high levels of contaminants being discharged into waterbodies in rainfall events then this proposed system would need to contain all contaminants within the site and prevent them from entering both the ground and surface water systems. It is noted that the water table in this area is close to the ground surface. Page 2 of the peer review report by Geotech Consultant Ian McMahon which reviewed the geotechnical information submitted with the PPC62 application recognised that "The water table was measured at 0.6, 0.7 and 1.1m in three of the auger holes" when soil testing was undertaken across the site. This would indicate that there is potential for any excavation of stormwater management areas to intercept the water table and thus impact on the size and capacity of the proposed system. The Council's Asset Manager Water Services - Mr Murray England, has also indicated that there would likely be a need for



further stormwater management areas and that primary and secondary run off to Birdlings Brook would occur. Mr Hopkins in his evidence has also recognised the need for primary and secondary runoff to Birdlings Brook. The submitters consider that this would be an unacceptable scenario given the already elevated levels of contaminants recorded in Birdlings Brook under existing urbanised levels.

- 5.13 At paragraphs 35 and 36 of Mr Hopkins' evidence he has set out Rule 5.93 of the Canterbury Land and Water Regional Plan and how conditions 2 and 3 of the rule would require analysis of flow and contaminant management. However, and with respect, it is considered that condition 1 of that rule may not be met because the proposal does not meet the stipulated 11 August 2012 date and this would direct the proposed activity as being considered a non-complying activity pursuant to Rule 5.94:

*Rule 5.94*

*The discharge of stormwater or construction-phase stormwater from a reticulated stormwater system onto or into land or into or onto land in circumstances where a contaminant may enter water, or into groundwater or a surface waterbody that does not meet the conditions of Rule 5.93 is a non-complying activity.*

- 5.14 Regardless of where stormwater is drained to or how it is managed, it appears that there is real potential for there to be an increase in contaminants reaching nearby waterways and/or groundwater. Even if contaminated runoff from any eventual housing is managed within the proposed ODP stormwater management area, this may not deal with the runoff of contaminants experienced from increased traffic in the vicinity which may not be treated within the PPC62 area (potentially 800 more vehicles in the area – based on a two per household scenario).
- 5.15 Given the above considerations the submitters remain cautious and concerned that PPC62 will result in significant adverse effects on surface and ground water quality. Having considered the information available relating to the existing township stormwater disposal effects this concern is justified, particularly given that the gaining of consent for the existing disposal appears to be still some way off with considerable work to be done to ensure suitable stormwater management plan is in place. The submitters question the ability to confidently determine PPC62 given that there remains significant questions over the disposal of stormwater for the existing residential, business and industrial areas of Leeston.

***Potential Increased Water Flows in Birdlings Brook***

- 5.16 There is potential that PPC62 will cause raised water levels in Birdlings Brook. Should this occur for sustained periods or cause increased flood levels then there is the potential to affect nearby farmland and/or be detrimental to the retention of riparian restoration works. The photographs attached in **Annexure E** shows significantly raised water levels in Birdlings Brook as a result of a high rainfall event in July 2017 near Lochheads Road, Lakeside. While this level was doing some damage to the existing riparian planting that has been established at the site, further heightened levels due to increased stormwater runoff from Leeston would definitely damage or destroy the planting. It is also noted that contaminants including copper and zinc are also detrimental and toxic to plants.

- 5.17 Landholders are also concerned that additional contaminants reaching farm land via flood events or through groundwater contamination may have an adverse impact on the ability for crops to meet increasing food production standards. For example, produce leaving farms is now highly scrutinised for toxins and where toxin levels cannot be met then produce contracts may be breached leading to loss of investment and income. This may arise if there were increased cases of flood waters containing metal contaminants covering crops or pasture.

***Potential Increased Adverse Effects Resulting from Leeston Stormwater North Bypass***

- 5.18 It is critical to the landholders downstream of this proposal that it does not further exacerbate the potential issues associated with what appear to be design failings that may occur as part of the stormwater upgrade for Leeston. The proposed Leeston Stormwater North Bypass upgrade that is to pass through the northern aspect of the PPC62 land will improve flood hazard effects across Leeston Township and through the southeast of the township. However, the design modelling indicates that there are significant areas of farmland in the vicinity of Volckman Road and to the east of the township which will experience more widespread flooding effects and in some cases to projected deeper flood water levels. The maps attached in **Annexure F** were provided to an affected landholder by the Council after the meeting with submitters on PPC62.
- 5.19 While the submitters appreciate that this upgrade is not directly related to this re-zoning proposal, although both the Council and applicants representatives have stressed the importance of vesting the bypass section within the PPC62 area in the Council as being critical to this upgrade, they are concerned that any further stormwater flowing into this upgraded system and not already calculated into the modelled projections would further exacerbate flood hazard events and contamination beyond the township boundary. The resulting outcomes would include further loss of crop and contamination, increased delay in farm cultivation activities and significant property damage. It is understood that there may not have been any consultation with landholders in this downstream area until interest in the effects of the PPC62 application was brought to the fore.
- 5.20 The submitters feel that it is appropriate to bring this to the attention of the Hearing Commissioner/s to confirm there is no capacity for this PPC62 development to drain into the bypass system. Given the modelled effects downgradient of the existing capacity it is questioned if the system already exceeds proposed capacity requirements. For the submitters there is the cumulative concern that further development in Leeston will exacerbate flood effects to the north east and east of the township, in effect shifting the flooding effects from the west to the east and then potentially further contaminating Birdlings Brook through allowing PPC62.
- 5.21 It is also noted that previous and considerably smaller re-zoning applications to the southwest of Leeston have been declined in the past due to concerns over stormwater disposal and flood hazard - Proposed Plan Change 49, in 2000, Millbridge Limited, Feredays Road. While the Commissioner/s cannot take this decision into account while making an independent decision on PPC62, it does highlight that concerns of this nature have been considered of significance previously.

## **Conclusions - Surface and Groundwater Effects**

- 5.22 The Section 42A Reporting Officer and Council Asset Manager for Water appear comfortable in allowing any stormwater issues to be dealt with at the stage of subdivision. Although Mr England considers it would be appropriate for a stormwater consent to be obtained before the subdivision consent is sort. This would indicate that there are uncertainties with these effects that have not been dealt with yet. The submitters consider that there is an obligation imposed by Section 76(3) of the Act that requires an assessment of the environmental effects, including any adverse effects, of the proposal. It is not appropriate to disregard any potential adverse effects because they will be dealt with later.
- 5.23 It is the submitters' desire that issues relating to stormwater disposal are addressed and assessed appropriately at the time of considering PPC62. Should it not be adequately considered at this time then there is potential that the 'horse will have bolted' as far as hearing relevant concerns on stormwater effects. In addition, it could also result in a scenario where a large area of land is re-zoned for residential purposes but cannot progress because a stormwater disposal consent cannot be obtained. The information provided above indicates that the issues of stormwater disposal for Leeston and any future development remains unresolved at this time and that considering a proposal for a further 400 plus households may be beyond the capacity of the township and the surrounding environment at present.

## **6. ELLESMERE AREA PLAN**

- 6.1 Leeston Township is subject to the development discussion and outline provided in the Ellesmere Area Plan. The location of the PPC62 area is consistent with the location of where new residential development might be located. However, this area plan also highlights the propensity of flooding and stormwater as being major issues for the town (Figure 8 Leeston Opportunities and Issues, Leeston, Ellesmere Area Plan) and how it has historically influenced the growth of the township. Both of these issues are highlighted on the subject land along with loss of rural land.
- 6.2 The Plan also states that 'Retrofitting stormwater infrastructure is complex and also limits opportunities to intensify or infill established neighbourhoods' (Page 25, 'Issues - Population, growth capacity and urban form'). Page 26 of the Ellesmere Area Plan further reiterates the issues associated with wastewater treatment and stormwater disposal in the township and the importance to tangata whenua given that drainage ultimately will ultimately flow to Lake Ellesmere/Te Waihora. Birdlings Brook and Harts Creek are also of importance to tangata whenua being located within the Cultural Landscape/Values Management areas under the provisions of the Canterbury Land and Water Regional Plan.
- 6.3 Part of the PPC62 land is located in the Leeston Area 1 - Lee 1 which is a preferred siting for township growth provided improvements to the township's existing infrastructure upgrading issues can be resolved. In other words, signalling that stormwater issues be resolved for these areas before further re-zoning occurs. The current proposal suggests re-zoning and then dealing with stormwater management. Essentially PPC62 appears to 'require' further re-zoned land in order to deal with the stormwater issue. There are also a number of disadvantages listed for this Lee 1 area including: high groundwater, localised flooding and poor land drainage. The

remainder of the PPC62 site, while labelled with a future direction of growth title, is not listed as one of the preferred areas. The conclusion of the Leeston section of this Plan sets out specifically the intent of what is envisaged for the township until 2031 and also comments on the difficulty of retro-fitting stormwater systems. While this proposal would not technically be a retrofit, it will result in a considerable area of land used for stormwater management which could then not be developed for housing. Therefore any future development could result in further urban spread over time onto productive rural land.

- 6.4 Overall, the submitters consider that the proposal is not consistent with what is intended for Leeston until 2031, based on the concerns around stormwater disposal. The submitters also raise the concern of the application of deferred zonings for long periods of time. Some of the subject land has been under the deferred label for many years and stretched across district plan periods. This is not an ideal scenario, particularly when environmental effects may become more adverse or change throughout the deferred period. Where there are no foreseeable remedies to the restrictions to future land development and the existing deferred zonings, or, the remedies may be some considerable time away, then the submitters suggest that deferred zonings should be avoided. This is especially the case when there may already be significant adverse effects occurring prior to deferrals being lifted.

## **7. CONCLUSIONS**

- 7.1 From the above assessment the following conclusions are reached:

1. Contaminants in Birdlings Brook may already exceed Canterbury Land and Water Regional Plan Water Quality Standards for copper and zinc which are key elements that emanate from residential development. PPC62 proposes to retain stormwater on the site but will drain to Birdlings Brook in primary and secondary stormwater flows even with the proposed stormwater management area in place. Further stormwater in Birdlings Brook may also detrimentally affect riparian planting and management downstream to Harts Creek and ultimately Lake Ellesmere/Te Waihora;
2. The proposal to date has not addressed adequately adverse environmental effects on surface water and groundwater quality and quantity. This remains of concern given that the SDC is yet to obtain a stormwater disposal consent from ECan for the existing Leeston Township. Available information to date indicates there may already be significant adverse effects occurring with regard to the existing stormwater disposal system that need to be addressed;
3. There is no capacity for any of the proposed PPC62 land to discharge stormwater to Leeston Creek and/or the existing Leeston stormwater disposal system because of the significant flooding effects that may arise at the downgradient end of that system on rural land. Disposing of stormwater to Leeston Creek is therefore not an alternative option to avoid further potential adverse effects on Birdlings Brook;
4. The submitters are of the view that should PPC62 be approved then it could seriously jeopardise the existing and continued restoration of the riparian areas of Birdlings Brook

and Harts Creek and be detrimental to the health of these waterways and Lake Ellesmere/Te Waihora.

- 7.2 Given the above, the submitters consider that PPC62 should not be approved unless the adverse environmental effects associated with stormwater can be avoided.

## **8. RECOMMENDATIONS**

- 8.1 The submitters recommend that the Hearing Commissioner/s make one of the following decisions:

1. Decline PPC62 in its entirety;

Or,

2. Approve an area of the PPC62 area which is capable of providing a maximum of 80 residential allotments in line with the current water supply and sewerage disposal servicing limitations and where stormwater management can be retained and managed within the zoned area with no contaminated runoff reaching Birdlings Brook or Leeston Creek. The Outline Development Plan will need to be amended to ensure it is clear how and where stormwater management will be dealt with. The submitters consider that this 80 allotment area may be best sited on the area north of Leeston Dunsandel Road;

And,

This area remains a deferred zoning until a stormwater disposal consent has been approved for the existing Leeston Township by Environment Canterbury.

And,

That additional rules be inserted in the District Plan that minimise the run off of contaminants from each residential allotment before reaching reticulated stormwater disposal systems.

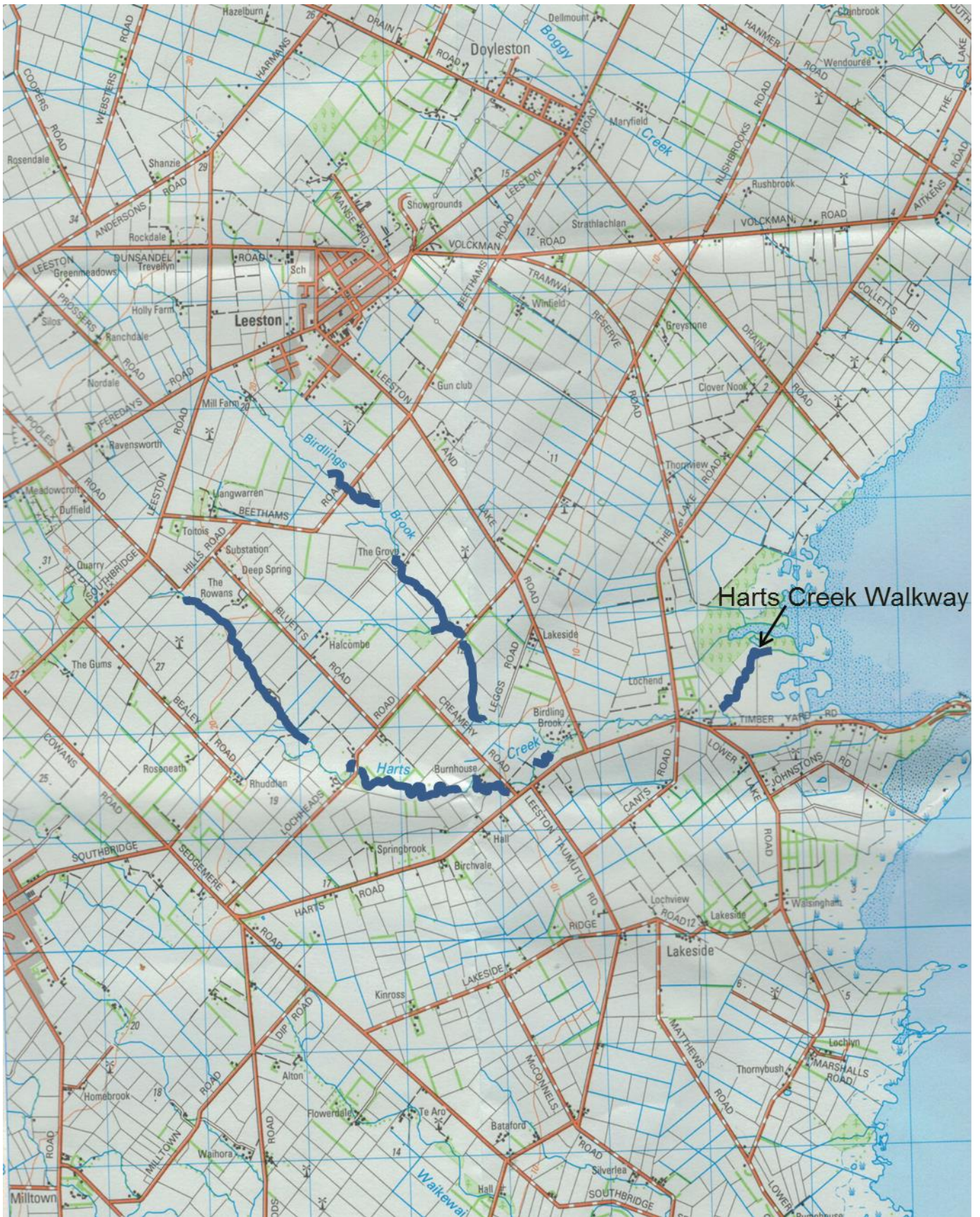
**ANNEXURE A**

**Lowland Streams**

**Birdlings Brook and Harts Creek**

**Location and Restoration Project Sites**



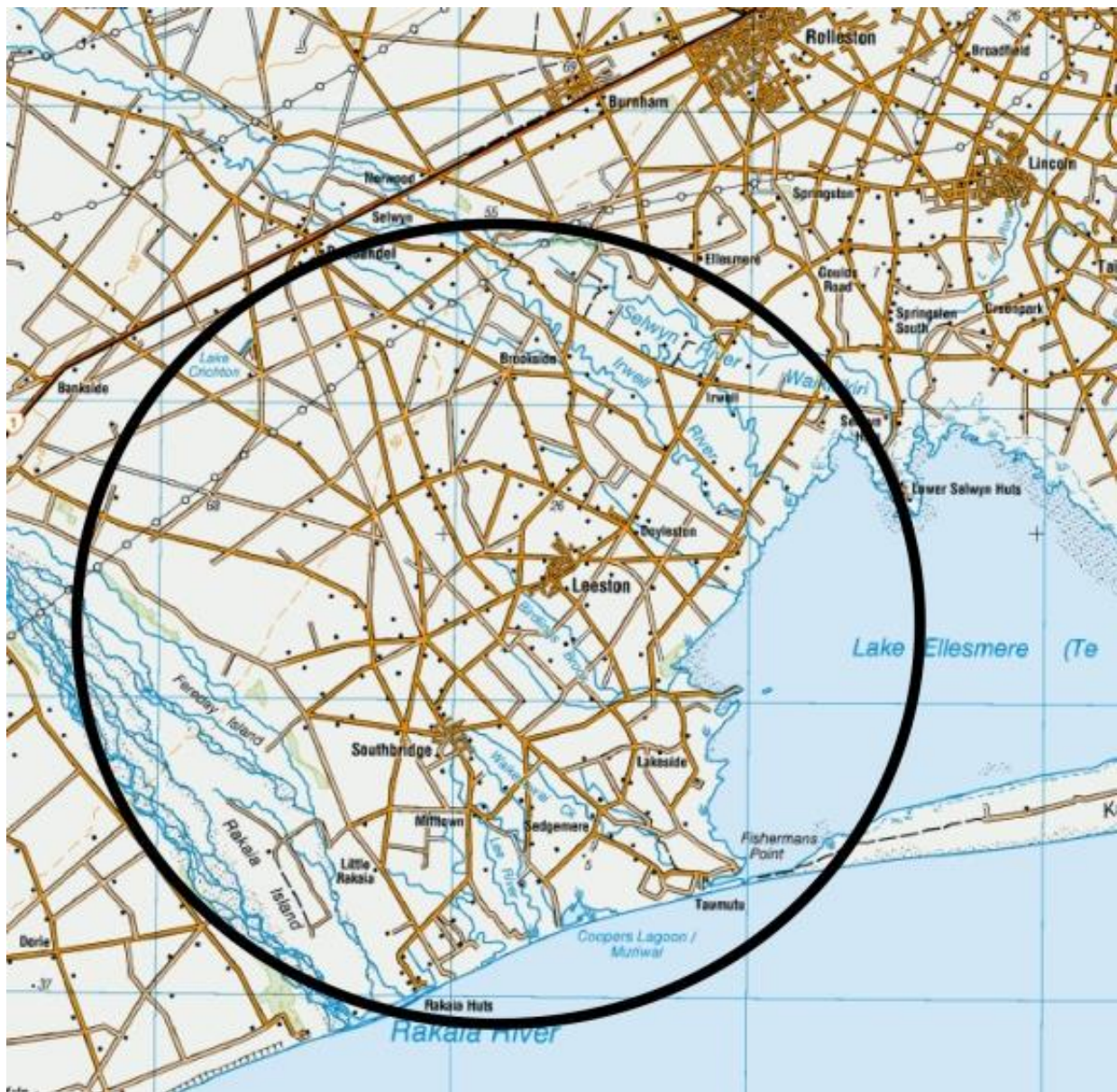


## **ANNEXURE B**

**Ellesmere Sustainable Agriculture Incorporated**

**Membership Area**





**ANNEXURE C**

**Water Quality and Ecology Technical Report - Jacobs**

**For Leeston Stormwater Disposal**

**Resource Consent Application CRC186175**

**June 2018**

*See attached electronic file*

**ANNEXURE D**

**Environment Canterbury Request for Further Information**

**Resource Consent Application CRC186175**

*See attached electronic file*

## **ANNEXURE E**

### **Birdlings Brook Water Level**

**July 2017**











## **ANNEXURE F**

### **Leeston Stormwater Northern Bypass**

#### **Flood Modelling Maps**





#### Legend

- Inflow Boundary
  - Cadastral Boundaries
  - Stormwater Pipes
  - MIKE 11 Network
  - MIKE 21 Model Extent
- Water Depth (m)**
- >1.00
  - 0.75 - 1.00
  - 0.50 - 0.75
  - 0.25 - 0.50
  - 0.10 - 0.25
  - 0.05 - 0.10
  - 0.00 - 0.05

#### Notes:

1. The flood information represented on this map has been derived based on the Leeston Stormwater Bypass hydraulic model developed by Aurecon. Refer to the Leeston Stormwater Bypass Flood Modelling Report (June 2018, December 2018) for hydraulic model assumptions and limitations.
2. Peak flood depth within the MIKE 11 model extent is not shown.
3. The flood information represented on this map does not include for floodward and as such is not recommended building level.
4. Aerial photography and stormwater network asset data provided by SCC.

Date: 3/10/2017

Version: 2

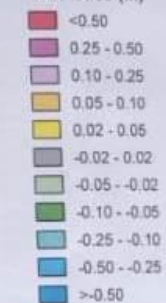
Selwyn District Council Leeston Stormwater Bypass Flood Modelling  
 Figure A1: 1% AEP Event - Existing Scenario - Peak Flood Depth and Inundation Extent







- Difference (m)



**Notes:**

1. The flood information represented on this map has been derived based on the Levee-to-Stormwater System Hydraulic model developed by AECOM. Refer to the Levee-to-Stormwater System Flood Modeling Report (November, December 2016) for hydraulic model assumptions and limitations.
2. The flood information represented on this map does not include for floodward and is built to the recommended building level.
3. Aerial photography and stormwater network asset data provided by GSC.
4. See design report for a description of the mitigation measures included in this model scenario.

Date: 3/10/2017

Version: 1

Selwyn District Council Leeston Stormwater Bypass Flood Modelling

Figure A6: 1% AEP Event - Mitigation Option 1 Scenario - Existing Scenario Difference Map

Page 39/39  
P:\2271\Stage 3 SW Modeling\GIS\Food Mapping\Fig 3A\_LSD\_MDT\_CPI\_East\_OB.mxd 21/10/2016

From May 1998



A3 scale: 1:20,000

0 100 200 300 400 500 m

Job No: IIF10  
Project: NZTM