

**DATE:** September 10, 2018

**FILE:** 5340-04

**TO:** Chair and Directors  
Electoral Areas Services Committee

**FROM:** Marc Rutten, P.Eng.  
Acting Chief Administrative Officer

Supported by Marc Rutten, P.Eng.  
Acting Chief Administrative Officer

*M. Rutten*

**RE: Feasibility Study - Composting Toilet Residuals Management Facility**

---

### **Purpose**

To seek the support of the Electoral Areas Services Committee (EASC) to submit an application to the Infrastructure Planning Grant Program (IPGP) to fund feasibility study work for a composting toilet residuals management service for Hornby Island.

### **Recommendation from the Acting Chief Administrative Officer:**

THAT an application be made to the Infrastructure Planning Grant Program for a feasibility study for a Hornby Island composting toilet residuals management service;

AND FURTHER THAT the 2019-2023 financial plan for Service 155, Hornby Island Feasibility Studies, include up to \$5,000 for the Hornby Island composting toilet residuals management service feasibility study for further consideration and approval.

### **Executive Summary**

- The need to consider off-site discharge options for composting toilet residuals was triggered by standards and guidelines introduced in the 2016 B.C. Manual of Composting Toilets and Greywater Practice (the Manual).
- The Manual specifies three options to manage composting toilet residuals including off-site discharge, on-site burial and on-site surface application. Monitoring and processing requirements specified in the Manual now make it more challenging for homeowners with composting toilets to discharge organic residuals on-site.
- A delegation was received at the May 14, 2018 EASC meeting requesting resources be allocated to a feasibility study to consider development of a residuals composting facility on Hornby Island at the Hornby Island Waste Management Centre (HIWMC). A number of community groups, organizations, and provincial agencies expressed their support to explore this opportunity further (Appendix A).
- Staff are recommending that an application for funding be made under the IPGP for a composting toilet residuals management facility feasibility study. IPGP program staff have advised that the next deadline for application review will be January 16, 2019.

Prepared by:

***D. Monteith***

---

Darry Monteith  
Engineering Analyst

### **Stakeholder Distribution (Upon Agenda Publication)**

Ed Hoepner, ROWP	✓
------------------	---

### **Background/Current Situation**

In July 2016, the BC Ministry of Health published the Provincial Manual of Composting Toilet and Greywater Practice. The Manual provides a comprehensive set of provisions that support the design, installation and maintenance of composting toilet-based sewerage systems, and aligns with the Sewerage System Regulation (SSR), *Environmental Management Act*, Municipal Wastewater Regulation and BC Building Code. The Manual identifies composting toilets as part of a sewerage system under the SSR. A composting toilet system can now be filed as part of a SSR filing with the local health authority.

Among the provisions introduced in the Manual are new standards for the management of composting toilet residuals. The Manual specifies three options to manage composting toilet residuals including off-site discharge, on-site burial and on-site surface application. Monitoring and processing requirements specified in the Manual now make it more challenging for homeowners with composting toilets to discharge organic residuals on-site.

In May 2018, Ed Hoepner, ROWP, presented information to the EASC on the new Manual and the challenges it presents for on-site residuals management. Mr. Hoepner requested that resources be allocated to a feasibility study to evaluate options for a community processing facility at the HIWMC (see correspondence attached as Appendix A). The study would also determine the level of need for such a facility.

Composting toilets offer a cost-effective, ecofriendly addition to conventional onsite sewerage systems within the scope of the SSR. As discussed in Mr. Hoepner's presentation, it is expected that off-site discharge would be preferred by most homeowners, especially those new to composting toilets. A community processing facility would support the general development and use of composting toilets and enhanced household water efficiency.

A feasibility study would investigate the number of homes and businesses using composting toilets on Hornby Island, estimate the capital and operating costs of receiving residuals from composting toilets and processing them at the HIWMC, determine regulatory requirements, and address odour control and other environmental and social factors. Staff recommend that the scope of the feasibility study also include evaluation of alternative options including managing residuals at the existing Comox Valley Sewage Service Biosolids Composting Facility.

### **Policy Analysis**

*Local Government Act* section 800 (2)(c) provides the authority to undertake feasibility studies in relation to proposed services. Feasibility studies services were established for Baynes Sound – Denman/Hornby Islands (Electoral Area A), Lazo North (Electoral Area B), and Puntledge-Black Creek (Electoral Area C) on October 30, 2000.

At its May 2018 meeting, the EASC passed the following motion:

*THAT staff prepare a report regarding a feasibility study on providing a composting toilet facility at the Hornby Island Waste Management Centre.*

### **Options**

The EASC has the following options to consider:

1. Support an application under the IPGP to complete a feasibility study to evaluate options for off-site residuals management for composting toilets on Hornby Island.
2. Not support a feasibility study at this time.

Staff recommend option one as it allows further investigation into the management of composting toilet residuals on Hornby Island while maximizing the use of senior government grant funding.

### **Financial Factors**

It is recommended that an application be made under the IPGP to complete this work. IPGP program staff have advised that the next deadline for application review will be January 16, 2019.

The IPGP funds 100 per cent of the first \$5,000 and 50 per cent of the next \$10,000 of eligible project costs up to a maximum grant amount of \$10,000.

Up to \$5,000 will be included in the 2019-2023 financial plan for Service 155, Hornby Island Feasibility Studies, to cover the Comox Valley Regional District's share of project funding, pending the successful award of a \$10,000 grant under the IPGP. If an IPGP grant is not able to be secured, alternative sources of funding will be explored.

### **Legal Factors**

Legal factors will be explored in detail if a feasibility study is pursued.

### **Regional Growth Strategy Implications**

All onsite wastewater management initiatives will be developed to align with the goals and objectives of the Comox Valley Regional Growth Strategy to “provide affordable, effective and efficient services and infrastructure that conserves land, water and energy resources.”

### **Intergovernmental Factors**

Consultation with regulatory agencies, Islands Trust and impacted professional organizations will be completed as required throughout development of the study.

### **Interdepartmental Involvement**

The Engineering Services Branch has taken the lead in preparing this report.

### **Citizen/Public Relations**

A communications strategy will be developed if a facility for off-site residuals management is further considered following the results of the feasibility study work.

Attachments: Appendix A – “Correspondence – Hornby Composting Toilets”

April 17, 2018

Comox Valley Regional District Electoral Area Services Committee  
c/o Bruce Jolliffe Area A Director  
Comox Valley Regional District  
600 Comox Rd.  
Courtenay, B.C.  
V9N 3P6

Dear Mr. Jolliffe and Committee Members,

This letter is to bring awareness and a possible solution to the recently introduced B.C. Manual of Compost Toilets and Greywater Practice, brought forward into practice by the B.C. Ministry of Health, summer 2016. These standards and guidelines outline the new industry protocols for registered practitioners or professionals to undertake the design, construction, maintenance, and filing of a composting toilet and/or source separated greywater system.

We request of the Comox Valley Regional District that funds be allocated to regional district staff to undertake a feasibility study to use an area of land at the Hornby Island Recycling Depot for the proposed service of receiving stabilized residuals from composting toilets for the purpose of processing to Class A compost standards.

Although the purpose and use of the Recycling Depot is for solid waste management and recycling, it seems an ideal site for this proposed facility as:

- Currently composting of yard wastes takes place at the recycling depot and so there is an overlap between the recycling practice of composting organic matter and this aspect of liquid waste bio-solids management.
- The Recycling Depot has restricted vehicular access and so allows for easier control of receiving compost residuals.
- It is already identified and used as a semi-industrial area.
- The high use of the depot by both residents and visitors offers an ideal venue for education.
- The high public visibility of the location would enhance the possibility of this facility being a model for other communities.
- As a model, the partnership with a local regulatory body such as the Regional District, can be demonstrated.
- The current Recycling Committee and staff are very supportive as is the Hornby Island Residents and Ratepayers Assoc.

The Manual specifies three possibilities for the management of composting toilet residuals, depending on stages of compost curing and maturity. These are; off-site discharge, on-site burial, and on-site surface application, with the monitoring and processing requirements increasingly challenging with the onsite categories. It seems probable that most householders may not want to undertake the level of management required for on-site use, and, as such, the off-site discharge option would be the commonly preferred one, especially for homeowners new to composting toilets or considering having one installed. For off-site discharge, the manual specifies the use of a "composting toilet processor to allow safe and hygienic removal of accumulated organic matter." To this, the proposed facility would

add the stipulation of receiving only stabilized organic matter, i.e., has no noxious odour or recognizable fecal matter.

A community processing facility will support the general development and practice of the use of composting toilets in B.C. and in so doing; will contribute to water conservation and enhance the viability of these systems being an option for failed septic systems. Both the Hornby Island Residents and Ratepayers Assoc. and the Hornby Island Recycling Depot Management Committee have expressed their support by unanimously endorsing this proposal.

The feasibility study would determine the number of composting toilets on Hornby Island, the need and potential level of use; initially and over time, zoning, required permits, capital and operating costs, funding possibilities, ownership structure, facility design, vector control, public acceptance, ensuring no environmental detriments, and establish odour control standards.

There has not been an expressed need for this service on Hornby Island prior to now because before the introduction of the new Standards and Guidelines in B.C. there has been no definitive regulatory environment in place to govern the use of composting toilets. Now that the fate of final compost discharge is defined in the new manual, it can be seen what the next steps required are.

The Hornby Island Co-op general store is looking into constructing new public toilets at their site and are leaning strongly to using composting toilets. The proposed facility for composting residuals has a bearing on their decision to use composting toilets or not. They have put off finalizing their design until they see if there will be infrastructure support.

The proposed feasibility study would consider the anticipated staff time requirement in greater detail but for now it is anticipated that time required for receiving and processing of compost would probably not be more than one or two days a month, which, approximately would be a part time position of one month per year. As well, there would be minimal electrical requirements. It is anticipated that annual costs would be in the neighborhood of \$5000 - \$10,000.

A collaboration between the Heron Rocks Friendship Society's, Water Stewardship Project ([www.hornbyislandwater.org](http://www.hornbyislandwater.org)), and the Hornby Island Community Economic Enhancement Corporation ([www.hiceec.org](http://www.hiceec.org)), through research and a public consultation process, produced the Hornby Water Plan, December 2016. The proposed humanure composting facility falls within all 3 of the currently identified Water Plan implementation strategies. These organizations have shown that there is a need for this facility as expressed in their attached letters of support.

Potential ownership/management models for the proposed facility are:

- Solely owned and operated by the CVRD with a management contract with the Hornby Island Residents and Ratepayers Society
- Cooperative, made up of owners of composting toilets and interested parties under lease with CVRD
- Public/Private Partnership, with CVRD and private or cooperative partner.

I would like to request that I be invited as a delegate to speak to this request at the meeting of the Electoral Area Services Committee meeting when this letter will be resented for consideration. Having

been a member of the technical team that created the new Manual, I am familiar with the new standards and guidelines and can also speak to its intents and purposes.

I appreciate your attention and consideration of this matter.

Respectfully Yours,  
Ed Hoepfner  
Registered Onsite Wastewater Practitioner (ROWP)  
Planner/Installer  
Hornby Island, B.C.

C.C.  
Marc Rutten P.Eng.  
General Manager of Engineering Services Branch  
Comox Valley Regional District

**Please find attached, letters of support from:**

The Hornby Island Recycling Committee

The Hornby Island Residents' and Ratepayers' Association

The Islands Trust Hornby Island Local Trust Committee

Rupert Benzon, Manager Land Use, B.C. Ministry of Health

John Rowse, Executive Director, B.C. On Site Sewage Association

Garth Millan, President, Western Canada Onsite Wastewater Management Association, B.C. Branch

Hornby Island Community Economic Enhancement Corporation

Hornby Water Stewardship Project

Sept. 26, 2015

Dear Ed,

The Hornby Island Recycling Committee would like to acknowledge that we heard your proposal to explore the possibility of creating a Hornby Composting Toilet Processing Facility at the Hornby Island Recycling Depot at our April 22, 2015 monthly meeting. We appreciated your thorough and well thought out proposal and presentation. We encourage support for this project by HIRRA and the CVRD.

There was general agreement that this is a great idea and that the Depot is the logical place for a central composting facility for human waste. The Committee supports the project in principle.

The Minutes of our April 22 meeting read "A central certified composting facility would be a great community asset to support local composting toilets and to create "class A biosolids." We felt "the Recycling Depot would be an ideal place to finish partially composted material."

You noted in your presentation that the composting facility would not be intended to accept fresh material. This would reduce the problems associated with transport. Transportation could be via individual delivery, through a community service or a private business.

There was general agreement that such a facility would be beneficial to the whole community in terms of education, demonstration, retention of nutrients on-island, and improving the safety of compost from composting toilets.

There was general agreement that it would also be good to have a public presentation at a HIRRA meeting. There was also general agreement that the Committee would like to be kept informed about the progress of the project and to be given notice of when more active participation in a joint advisory group will be needed.

Sincerely,

Jan Kennedy

Chairperson, Hornby Island Recycling Committee



**Hornby Island Residents' and Ratepayers' Association**  
P.O. Box 16, Hornby Island B.C. V0R 1Z0

---

October 13, 2016

To the Comox Valley Regional District Board and Waste Management staff

To whom it may concern,

The Hornby Island Residents and Ratepayers Association (HIRRA), representing the Hornby Island community, supports Ed Hoepfner's letter requesting conditional agreement from the Comox Valley Regional District in order to proceed with a feasibility study to design, build, and operate a new composting facility at the Hornby Island Recycling Depot. The proposed facility would be designed to receive partially-composted organic material from composting toilets, provide safe final processing, and produce Class A Compost for use on-island.

At the October 12, 2016 HIRRA meeting, several questions were raised by the assembly regarding security and staffing of the proposed composting facility, the cost for islanders to use the facility, and the number of composting toilets currently in operation on Hornby. It is our understanding that the proposed feasibility study would thoroughly explore and answer these questions.

After discussion, there was unanimous approval from the members in attendance for HIRRA to support this proposal in principle, subject to mutually agreeable conditions being identified and addressed.

Sincerely,

Reina LeBaron, Administrator  
On behalf of the HIRRA Executive

Cc: HIRRA Recycling Depot Committee and Manager

[www.hirra.ca](http://www.hirra.ca)

***We value our unique opportunity to self govern***





700 North Road, Gabriola Island, BC V0R 1X3  
Telephone **250-247-2063** Fax 250-247-7514

Toll Free via Enquiry BC in Vancouver 660-2421. Elsewhere in BC **1.800.663.7867**

Email [northinfo@islandstrust.bc.ca](mailto:northinfo@islandstrust.bc.ca)

Web [www.islandstrust.bc.ca](http://www.islandstrust.bc.ca)

November 24, 2016

The Comox Valley Regional District  
600 Comox Road  
Courtenay, BC  
V9N 3P6

To Whom It May Concern,

I am writing on behalf of the Hornby Island Local Trust Committee to express support for the development of a facility on Hornby Island to finish the composting of material from domestic composting toilets should this prove to be feasible and an appropriate location identified.

At its October 14, 2016, meeting, the Hornby Island Local Trust Committee passed the following resolution:

*It was MOVED and SECONDED,  
that Hornby Island Local Trust Committee Chair be requested to write to the Comox  
Valley Regional District in support of the proposal for a centralized composting facility to  
process residual composting toilet organics.  
CARRIED*

General support for a feasibility study into a composting toilet sewage treatment facility is reflected in Hornby Island Official Community Plan Policy 5.3.2:

*“The feasibility of facilities to fully treat sewage or to complete the treatment of material from composting toilets may be investigated through a comprehensive planning process, such as a Liquid Waste Management Plan process. Potential sites should only be considered in appropriate locations away from residential areas and proposed operations must be in compliance with all applicable regulations.”*

LTC members observed that this facility could be a pilot project that would benefit the whole Trust Area by providing guidance on ways to pursue effective alternate composting and greywater systems under British Columbia’s new regulations, thereby reducing potential impacts on groundwater resources. As island communities grapple with ongoing challenges to groundwater quality and quantity, and ever-increasing concerns about climate change, there is a growing need to develop technology and know-how in this field.

I understand that the CVRD's involvement, if any, in such a project will depend on many factors. From the Hornby Island LTC's point of view, a feasibility study, potentially followed by a pilot project, would directly benefit Hornby Island and would also create tools and information that would lead to better sewage management practices on other islands and in rural communities throughout BC.

Regards,

A handwritten signature in cursive script that reads "Laura Busheikin".

Laura Busheikin  
Chair, Hornby Island Local Trust Committee



November 30, 2016

Marc Rutten, P.Eng.  
General Manager of Engineering services branch  
Comox Valley Regional District  
600 Comox Road  
Courtenay, B.C.  
V9N 3P6

Dear Mr. Rutten,

This letter is in support of the proposed Compost Toilet Residuals Composting Facility for Hornby Island.

The Ministry of Health (MoH) provides leadership in developing programs and policies which promote community environmental health, prevent disease, and protect the public from environmental hazards. MoH works closely with stakeholders, including the onsite wastewater industry, to manage health risks in the areas of drinking water and onsite sewage.

Accordingly, MoH is responsible for administering the Sewerage System Regulation (SSR), pursuant to the Public Health Act, which governs the design, construction, and maintenance of onsite sewage systems in BC.

The SSR's 'outcome-based' approach places the responsibility for onsite system design, construction, and maintenance on homeowners and Authorized Persons, who are qualified under the regulation to carry out these activities. Authorized Persons are mandated under their professional certifying organization, the Applied Science Technologists and Technicians of BC (ASTTBC), to follow ASTTBC's Practice Guidelines, as well as the BC standard Practice Manual (SPM) which is referenced in the Regulation.

A subset of onsite sewage systems which Authorized Persons may consider suitable for particular sites includes 'compost-based' systems.

Construction of these systems for residential use has been enabled under the recently published Provincial Composting Toilet Manual, which can be found on the Ministry of Health website at:

<http://www2.gov.bc.ca/gov/content/environment/waste-management/sewage/onsite->

[sewage-systems/sewerage-system-standard-practice-manual.](#)

Accordingly, I understand that a proposal is in place to construct a compost toilet residuals compost facility for Hornby Island. Residents would work with industry and local government authorities to determine the optimum location, configuration, and operation of this facility for the purpose of supporting home owners with composting toilets as well as to support a viable option for addressing the issue of failing septic systems in the area. An "integrated" composting toilet system of this nature would be expected to take the organic loading stress off of existing compromised on-site systems. As well, sites where water is in short supply would benefit from this initiative.

The Ministry of Health is supportive of this project, as it dovetails effectively with the Provincial goal of expanding options for onsite to include 'ecofriendly' alternatives such as composting, which may be suitable for specific sites. Further, a project of this nature would serve as a valuable template for other regions of BC to consider similar facilities within local communities.

If you have any questions feel free to contact me.

Sincerely,

***Rupert Benzon***

*Manager, Land Use*

*Ministry of Health*

*PO Box 9646 Stn Prov Govt*

*Victoria, BC V8W 9P1*

*T: (250) 952-2128 F: (250) 952-1713*

*[rupert.benzon@gov.bc.ca](mailto:rupert.benzon@gov.bc.ca)*



# BC Onsite Sewage Association

PO 44151-2947 Tillicum Rd

Victoria BC V9A7K1

Tel: 778-432-2120 Fax: (877) 758-2288

November 27, 2016

Ed Hoepfner  
Registered Onsite Wastewater Practitioner (ROWP)  
Hornby Island, B.C.

Dear Ed

**Re: Hornby Island Community Composting Facility for Processing Composting Toilet Residues.**

Thank you for the opportunity to review your document, business plan and feasibility study for a composting facility on Hornby Island that will meet the needs of residents using composting toilets and ensure compliance with the Organic Matter Recycling regulation and the Manual of Composting Toilet and Greywater Practice from the Ministry of Health.

The proposed Ministry of Health manual requires disposal of residuals from composting toilets to be handled safely to ensure that public health and the environment are protected. This is to be achieved by the use of the standards found in the current Organic Matter Recycling regulation which contains provisions for composting human waste that ensure the destruction of pathogens and parasitic eggs and larvae using a time and temperature controlled process of composting. This type of composting is best achieved within an organised structure and not readily achievable by individuals.

The proposed model outlined in your document achieves the necessary checks and balances as it is an inclusive process involving government, individual home owners, the community and other regional stakeholders. Some of the challenges, as with most community projects will be identifying at least initial funding and sufficient organic matter to ensure ongoing function of the composting process within the initial stages of operation. The ratios of carbon to nitrogen and organic material and the presents of insufficiently dry product from household composting toilets may present a challenge and should be monitored as the program develops.

Although composting toilets are not a generally accepted mode of waste treatment they have a role to play in isolated areas with water shortages where other alternatives are not achievable and where owners can be counted on to properly maintain the systems.

In general BCOSSA considers this approach positive for the Hornby Island community and provides the checks and balances necessary to protect public health and the environment.

Yours Truly

John Rowse B.A.A.,C.P.H.I.(C), MA Env. R.O.W.P.



WCOOWMA Onsite Wastewater  
Management Association of BC

October 29, 2016

Marc Rutten, P. Eng  
General Manager of Engineering Services Branch  
Comox Valley Regional District  
600 Comox Road  
Courtenay, BC V9N 3P6

Dear Mr. Rutten:

**RE: Proposal to design, build and operate a facility to produce Class A compost on Hornby Island**

The WCOOWMA Onsite Wastewater Management Association of BC would like to express its support of Ed Hoepfner's proposal for the development of a facility on Hornby Island, designed and built to accept organic residuals from residential or other facility's composting toilets for the purpose of processing and producing Class A Compost on Hornby Island at the Hornby Island Recycling Depot. Ed has been a significant contributor and advocate for recycling in all its forms. He is a co-author of the new BC Guidelines for Compost Toilets and in fact designed and built the approved composting/treatment toilet currently in use at the Recycling Depot on Hornby Island.

The Recycling Depot on Hornby Island is an ideal location for a facility of this nature as it is already utilized for composting of yard wastes, it is in an area already designated for semi-industrial use, and it is already set up with vehicular access controls in place.

The development and operation of this type of a facility would provide an opportunity for the application of the new BC Manual of Practice for composting toilets, which would provide both Hornby Island and the Comox Valley Regional District with an opportunity to demonstrate leadership in this area of environmental stewardship, while providing an economical and reasonable option for householders dealing with aging septic systems, or those wishing to reduce their water consumption by utilizing composting toilets as part of their wastewater management plan.

A facility of this nature also has potential to be utilized for public education on waste and wastewater management in rural communities, as well as providing a location and opportunity for research on the use of composting to aid in the reduction of chemical and pathological constituents in human waste prior to returning that waste to the environment.

WCOOWMA-BC encourages Comox Valley Regional District to give serious consideration to this proposal.

Yours truly,

Garth Millan  
President

Cc: Jessie Lee, Assistant Mgr of Strathcona Waste Services  
Ryan O'Grady, P. Eng, Manager, Liquid Waste Planning  
Ed Hoepfner, ROWP, Hornby Island



December 20, 2017

To: Marc Rutten, General Manager of Engineering Services Branch, C.V.R.D.

Cc: Ed Hoepfner

Re: **Community Composting Facility Receiving Compost Toilet Residuals/Hornby Island, Report dated March 29, 2015**

After reviewing the 2015 proposal that Ed Hoepfner has put forward regarding establishing a facility for the production of "Class A" Compost from compost toilet residuals, at the Hornby Island Recycling Depot, our Group is writing this letter of support, in principle, for the proposal.

It is our understanding that support in principle has also been submitted by the Hornby Recycling Depot Committee and Manager, the HIRRA general assembly unanimously endorsed a letter of support to Regional District, as did the Local Trust Committee. Letters of support were also received from the Ministry of Health, and B.C. onsite wastewater associations.

Our group represents a collaboration between the Heron Rocks Friendship Society's Water Stewardship Project ([www.hornbyislandwater.org](http://www.hornbyislandwater.org)) and the Hornby Island Community Economic Enhancement Corporation ([www.hiceec.org](http://www.hiceec.org)). Together, through research and a public consultation process, we produced the Hornby Water Plan, December 2016. (a copy of which is on both of our websites).

We are now in the implementation phase of the Plan. *"Considering the desire for both short-term and long-term solutions, the following strategies have been selected for action in 2017:*

- I. General awareness and education, including: publications, enhanced website as a single source of information, "water risk" signage, school children instruction, DIY (do-it-yourself) training sessions, summer public talks, and home-and-water tours of existing successful "green" water and disposal systems on the island.*
- II. Individuals, including: conservation devices for wells, collection tanks, filtration systems, converting from pit to composting toilets, and a water testing service.*
- III. Research, including local geological understanding of the relationship of our ground to our water, and awareness and adoption of practices being pursued by other areas (i.e., regional districts, Islands Trust, provincial government, universities, non-government organizations, etc.)."*

This letter is being sent to support, in principle, the proposed humanure composting facility, as it falls within all 3 of these Water Plan implementation strategies.

Thank you for your consideration of the proposal.

Submitted by:

Ellen Leslie, for Hornby Water Stewardship Project



Darren Bond, for HICEEC

