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**REPORT TO CORE AREA LIQUID WASTE MANAGEMENT COMMITTEE  
MEETING OF WEDNESDAY, 24 MAY 2006**

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**SUBJECT**      **CORE AREA LIQUID WASTE MANAGEMENT PLAN – DOCKSIDE GREEN**

**PURPOSE**

To determine whether the committee wishes to support, in principle, an amendment to the Core Area Liquid Waste Management Plan (LWMP) to accommodate wastewater treatment and disposal plans for the Dockside Green development.

**BACKGROUND**

Upon completion, the Dockside Green development will occupy a 15-acre site in the City of Victoria on the west side of Victoria Harbour between the Johnson Street and Bay Street bridges. The developers would like to include an advanced wastewater treatment system to produce high quality effluent to use for flushing toilets, for irrigation and to create a water feature on the site. Wastewater effluent and stormwater would discharge to the harbour from the water feature. In the event of a treatment malfunction, a City of Victoria sewer is available as a backup system. Additional discussion about the Dockside Green development is provided in the attached copy of a letter from RCL Consulting Ltd. to the Ministry of Environment.

**Ministry Requirements**

An amendment to the Core Area LWMP is necessary for Dockside Green to discharge effluent to the harbour. The LWMP currently recognizes only two points of discharge to the environment (at Clover Point and Macaulay Point), excluding overflows. The amendment would recognize the addition of a discharge to the harbour.

As part of the amendment, an operational certificate will be appended to the LWMP. It will outline the discharge criteria that the Dockside Green project will be required to meet. The operational certificate will be issued to Dockside Green, or the subsequent owner and operator of the treatment system, and the owner of the system will be responsible for compliance with the conditions specified in the operational certificate.

In order for an operational certificate to be issued by the ministry, the developer will have to comply with other provincial requirements, including:

- completion of an environmental impact assessment
- compliance with the security requirements of the *Municipal Sewage Regulation*
- consultation with other agencies
- consultation with the public

Because an amendment to the Capital Regional District's (CRD) LWMP is required, ministry staff have indicated that a draft operational certificate and a proposal for a public consultation program should be submitted through the CRD.

### **CRD Staff Concerns**

Staff are supportive of the intent of the project but have some concerns that need to be addressed. These concerns include:

- environmental impact of the discharge
- application of the Regional Source Control program (RSCP) to Dockside Green
- safeguards to ensure that malfunctions of the treatment system are detected and the discharge of poor quality effluent is prevented
- liability of the CRD for the performance of the party named in the operational certificate as the owner of the treatment and disposal system
- Dockside Green's plans for sludge handling and disposal or beneficial use

The environmental impact of the discharge will be determined by the environmental impact assessment. Dockside Green will carry out an environmental impact assessment, which CRD staff will review when it is available.

Staff have identified a need for the RSCP to apply within the project area, in order to ensure that the harbour environment is protected and to ensure that uniform standards are applied throughout the region. Dockside Green representatives have indicated a willingness to cooperate with the CRD in this regard. Staff are currently investigating the legal authority that is available to apply the RSCP to Dockside Green and to recover funds to pay for source control.

The issue of safeguards to ensure adequate treatment of the discharge to the water feature will be addressed as part of the discussions with the developer about the operational certificate. Solutions could include systems incorporated into the design of the plant and appropriate monitoring and alarm systems.

Legal assistance will be obtained to address the issue of CRD liability for the performance of the owner of the treatment and disposal system. Preliminary legal advice and information from the Ministry of Environment indicates that the liability rests with the party named in the operational certificate.

Dockside Green's plans for sludge handling and disposal or beneficial use had not been provided at the time this report was prepared.

### **ALTERNATIVE**

A decision not to support an amendment to the plan would preclude Dockside Green from discharging effluent to the harbour and prevent the developer from creating a water feature using treated effluent. In that case, Dockside Green could discharge all of its waste to the City of Victoria sewer system or may have the option to treat part of its wastewater for use for irrigation and toilet flushing and discharge the remainder to the sewer.

### **FINANCIAL IMPLICATIONS**

There will be staff costs and legal costs associated with the amendment. Reasonable costs will be recovered from the developer.

**SUMMARY/CONCLUSIONS**

Dockside Green is proceeding with plans for development of a 15-acre site on the west side of Victoria Harbour. The company plans to treat wastewater from the development to a high degree and to use treated effluent for toilet flushing, irrigation and to create a water feature on the property. Wastewater effluent and rainwater will discharge to the harbour from the water feature.

In order for Dockside Green to implement its plans, an amendment to the Core Area LWMP will be required to recognize the addition of a wastewater discharge point to the harbour. CRD staff are supportive of the intent of the project but have some concerns that need to be addressed. Staff recommend that the committee support the amendment, in principle, subject to staff's concerns being addressed satisfactorily. The completed amendment to the plan will be submitted to the committee and Board for approval.

**RECOMMENDATION**

That the committee support an amendment to the Core Area Liquid Waste Management Plan, in principle, to accommodate the Dockside Green development, subject to staff's concerns being addressed satisfactorily.

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Bob Warman, PEng  
Assistant Engineer, Technical Projects

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Dwayne Kalynchuk, PEng  
General Manager, Environmental Services  
Concurrence

**COMMENTS**

RWW:cp  
Attachment: 1



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April 28, 2006

Ministry of Environment  
Environmental Protection, Vancouver Island Region  
2080-A Labieux Road  
Nanaimo, BC V9T 6J9

Attention: Mr. Randy Alexander  
Environmental Protection Manager

Dear Sir:

**Subject: Dockside Green – Treated Effluent Discharge - Victoria**

Dockside is a 15 acre site located in the heart of the City of Victoria. The site is located adjacent to the Upper Harbour and Downtown, between the Johnson and Bay Street bridges.

The City of Victoria issued a Request for Proposals (RFP) in October 2004 to redevelop the site according to a Development Concept written by the City in partnership with a range of stakeholders. The Development Concept envisions 1.3 million square feet of mixed use and sustainably developed buildings on a newly remediated site. Dockside Green, a partnership between Windmill Developments Ltd and Vancity Enterprises won the development proposal based on a triple bottom line program and its environmental approach to remediating a brown field site while providing the highest possible reuse/recycle program. This included a tertiary sewer treatment plant that would produce high quality effluent for reuse on the site in sanitary facilities, site irrigation and for supply of water to a stream located in the centre of the development. This stream will be combined with the overall rainwater management plan and will create the aesthetic centerpiece of the development site.

Dockside Green's approach to the project is based on the premise that preservation and enhancement of quality of life and the environment in our communities is essential to our economic prosperity. In order to achieve this goal, the developers are determined to achieve a Platinum LEED accreditation for the entire project making *Dockside Green* the first community based development in the world to attain this level of excellence. This is a very high profile project that has the support of all levels of government including financial commitments for achieving the highest level of LEED standards

The project is now proceeding to Phase I construction. The City of Victoria has agreed that Phase I can connect directly to its sewer system but the goal is to have the first building connected to the proposed sewage treatment plant on opening (August 2007) but no later than 8 months after the opening of phase 1. Once the treatment system is in place, Phase I sewage will be diverted to the new treatment plant. The City has also agreed that its sewer system can be used as a fail safe discharge option should the treatment plant ever fail. This however is very unlikely because the treatment plant is designed with twin treatment trains and peak flow balancing for the entire project. The project is phased over ten years so the plant will have excess capacity for a number of years during which flow monitoring and treatment evaluation can be completed.

We are now applying for approvals for the discharge of highly treated effluent to the Victoria Harbour via an internal system that combines a membrane filtration plant, nitrogen and phosphorous removal, disinfection and discharge to a biologically engineered waterway that will provide almost one kilometer of stream treatment of the Class A water discharged from the treatment plant. The stream will run through the middle of the developed land and is intended to be placed into a balancing pond prior to final discharge to the Harbour through an engineered eel grass and sand dissipation zone. The selected discharge area is currently a highly modified

bank that consists of extraneous fill materials and metal products that are slowly falling into the harbour. Our proposal is to reconstruct this damaged area to include a sloping revegetated marine foreshore with a subsurface dissipation pipe network that will allow the diluted and treated effluent to reenter the water system in a near natural manner.

In an effort to gain approvals for this system, we have met with the City, the Capital Regional District and some of your staff. It appears that a joint meeting of our staff personnel is required to work out the functional differences between the Ministry MSR and the CRD Liquid Waste Management Plan. Some of the items that need to be addressed are listed below:

1. Does the project conflict with the LWMP? The CRD is not certain where there might be conflicts.
2. If so, what needs to be amended to permit the treatment plant and the new high quality discharge?
3. Can this be achieved under a minor amendment?
4. What kind of authorization do you envision for this project?
5. Can an *Operational Certificate* be issued to permit the proposed use?
6. What do the CRD and Dockside Green have to do to make this project happen?

Based on the above, we are requesting a meeting with your staff, the CRD environmental services staff and our engineering personnel so that we can confirm the program and determine the steps required to achieve approvals.

On behalf of Dockside Green, we wish to express our appreciation to your staff who have been involved in this project and look forward to a positive meeting in the next week if possible. Currently, we have set aside time 20<sup>th</sup>, 21<sup>st</sup> and 22<sup>nd</sup> to meet your time constraints.

We would appreciate your advising us of a suitable time to meet with you and your staff.

Sincerely,

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R.H. (Rick) Lloyd, P.Eng.  
Principal, RCL Consulting Ltd.

Cc:	Joe VanBellegem	Dockside Green
	Carola Bloedorn	Dockside Green
	Bob Warman	CRD
	Laura Taylor	CRD
	Oscar Regier	WorleyParsons Komex