

APPROVAL IN PRINCIPLE
(Pursuant to Section 53 of the *Environmental Management Act*)

THIS IS TO CERTIFY that the remediation plan described herein submitted by ECOWASTE INDUSTRIES LTD. (“responsible person”) for the contaminated site identified in Schedule A of this document has been approved.

The remediation plan must be implemented by the responsible person in accordance with the requirements and conditions specified in Schedule B.


The substances for which remediation will be conducted and for which this Approval in Principle is valid are specified in Schedule C.

I have issued this Approval in Principle based on a review of the documents listed in Schedule D. I, however, make no representation or warranty as to the accuracy or completeness of that information.

A Director may rescind this Approval in Principle if conditions imposed in the Approval in Principle are not complied with or any fees payable under Part 4 of the Act or regulations are outstanding.

This Approval in Principle should not be construed as an assurance that there are no hazards present at the site.

2017-09-22
Date Issued



Alan W. McCammon
For Director, *Environmental Management Act*

Schedule A

The site covered by this Approval in Principle is located at 15111 Williams Road, Richmond, British Columbia and is more particularly known and described as:

Lot J EXCEPT: PART SUBDIVIDED BY PLAN 47993; SECTION 27 BLOCK 4 NORTH RANGE 5 WEST NEW WESTMINSTER DISTRICT PLAN 19680,
PID: 003-475-727 ("Panhandle"; north of Williams Road, south of Francis Road)

and

Lot C EXCEPT: PART SUBDIVIDED BY PLAN 47993, SECTION 22 BLOCK 4 NORTH RANGE 5 WEST NEW WESTMINSTER DISTRICT PLAN 19680,
PID: 003-574-083 ("South Landfill"; north of Francis Road, south of Blundell Road)

The approximate centre of the site using the NAD (North American Datum) 1983 convention is:

Latitude:	49°	9'	6.2"
Longitude:	123°	2'	58.2"

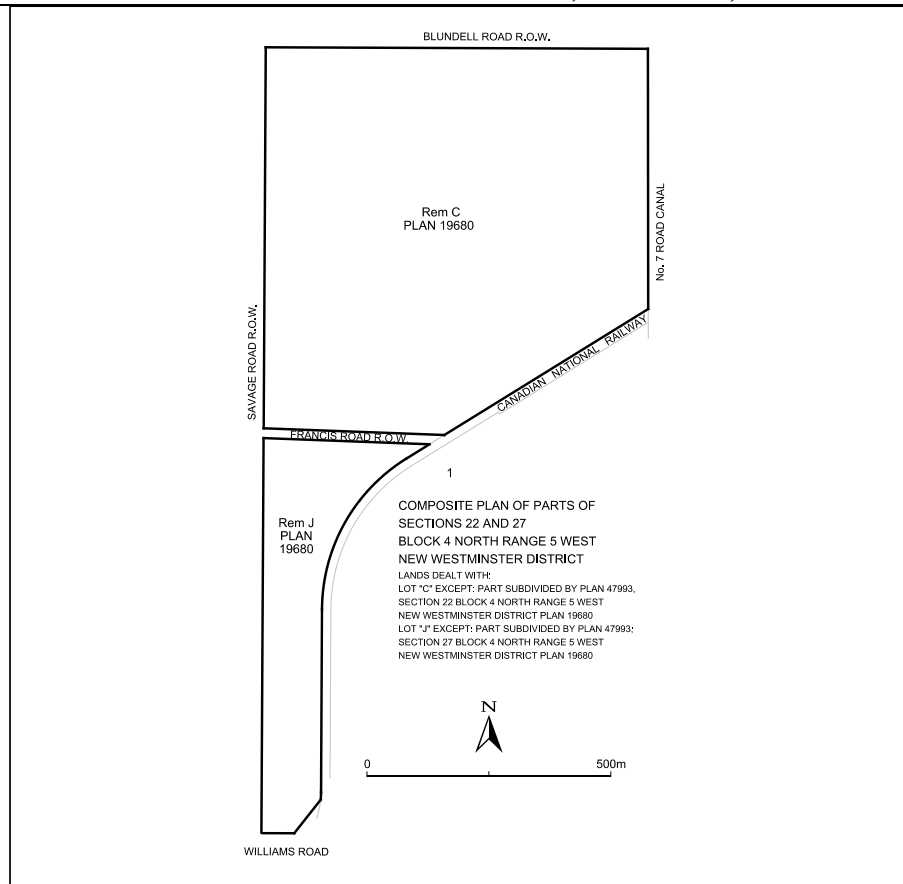
2017-09-22

Date Issued

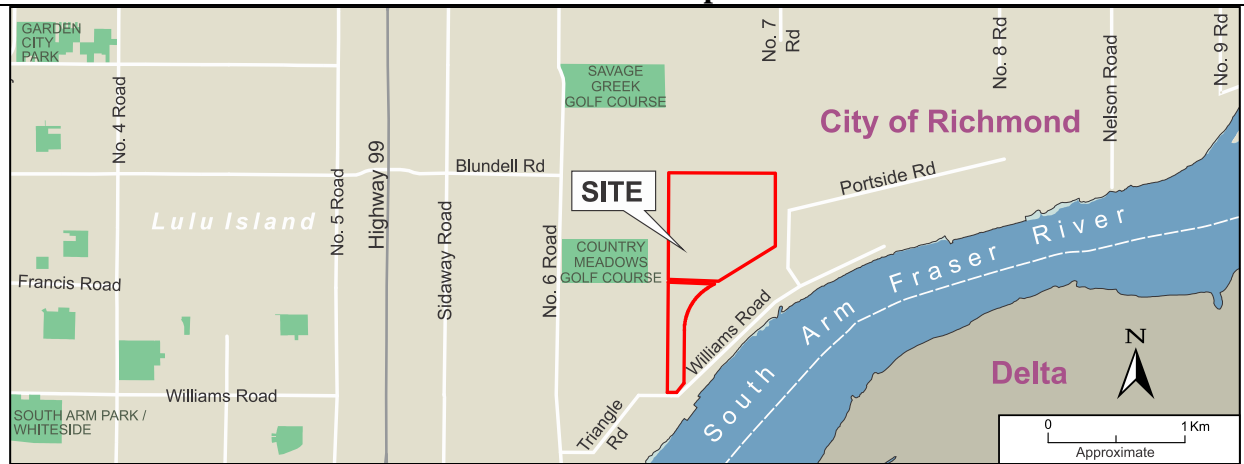


Alan W. McCammon
For Director, *Environmental Management Act*


Site Plan, Richmond, BC



Location Map



2017-09-22
Date Issued


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For Director, *Environmental Management Act*

Schedule B

Requirements and Conditions

WHEREAS Operational Certificate 4922 – issued under the provisions of the *Environmental Management Act* (“Act”) and in accordance with the Metro Vancouver Solid Waste Management Plan – governs management of solid waste at the site **AND** the Director, by letter dated November 30, 2016, provided a necessary release to the City of Richmond for issuance of the development permit for the site, **TAKE NOTE THAT** the following requirements and conditions are hereby imposed upon the responsible person:

1. Any conflict or inconsistency between this Approval in Principle and the requirements imposed in the Operational Certificate must be promptly identified by the responsible person in a written submission to the Director. The ongoing validity of the Approval in Principle is subject to ongoing compliance with the Operational Certificate, as amended.
2. For convenience, requirements imposed by the Director pursuant to Act section 54(3)(d) in the November 30, 2016 letter are hereby superseded by the requirements of this Approval in Principle. Please take note, however, that other aspects documented in the Director’s November 30, 2016 letter (e.g., commitments made by responsible person; details regarding the progressive – or phased – landfill closure, remediation, and redevelopment approach for the facility/site; advisories to responsible person, etc.) remain both relevant and important; please consult the Director’s letter for further details.
3. Remediation, including monitoring, inspections and maintenance of any works, must be undertaken by the responsible person in the manner and in accordance with the schedule specified in the remediation plan listed in Schedule D. Remediation of the site must be completed by December 31, 2027.
4. Any substantial modifications to the approved remediation plan, including the remediation schedule, or changes in land use, must be promptly identified by the responsible person in a written submission to the Director. An application for an amendment or new Approval in Principle may be necessary.
5. A Certificate of Compliance, pursuant to Act section 53, must be obtained for each site redevelopment phase prior to issuance of associated occupancy permits by the local government authority. The Director will, in part, give consideration to Act section 53 and Regulation section 49 when considering applications for Certificates of Compliance.

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Alan W. McCammon
For Director, *Environmental Management Act*


6. An annual letter report, prepared and signed by an Approved Professional, must be submitted to the Director by March 31 of each year. The report must address remediation progress made for the immediately preceding 12-month period from January 1 to December 31, and must include the following:
- (a) A summary of the remediation plan actions undertaken during the reporting period;
 - (b) An assessment of overall remediation progress in comparison to the remediation plan and schedule;
 - (c) An evaluation of the performance of ongoing engineered landfill works/controls and future engineered building works/controls as they apply to the remediation plan under this Approval in Principle; and
 - (d) Any supporting documentation (e.g., reference to reports/plans submitted in connection with the Operational Certificate; analytical reports; records of operation, inspections, maintenance of engineered works/controls, etc.)

The Director may require additional reporting during implementation of the remediation plan.

7. The documents listed in Schedule D indicate that vapour attenuation factors were applied to meet Contaminated Sites Regulation numerical standards for current and future site use. These vapour attenuation factors were selected based on assumptions about the structures, locations and depths of buildings existing or expected at the site. These assumptions include the following:
- (a) Ongoing operation of the Landfill Gas System beneath the South Landfill; and
 - (b) Buildings constructed at the site must be slab-on-grade.

Any inconsistencies that arise between the structures, locations and depths of proposed or constructed buildings at the site and the range of structures, locations and depths of buildings assumed in the selection of vapour attenuation factors in the documents listed in Schedule D must be promptly identified by the responsible person in a written submission to the Director. An application for an amendment or new Approval in Principle may be necessary.

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For Director, *Environmental Management Act*

Schedule C

Substances and Uses

Substances to be remediated in soil for industrial land soil use:

To meet numerical remediation standards:

- Antimony, arsenic, cadmium, chromium, copper, lead, molybdenum, nickel, selenium, tin, zinc; and
- Benzene.

Substances to be remediated in water for drinking water use:

To meet numerical remediation standards:

- Arsenic, cadmium, chloride, sodium, sulphate, sulphide (as H₂S);
- Toluene; and
- Benzo[a]pyrene.

Substances to be remediated in water for marine aquatic life water use:

To meet numerical remediation standards:

- Cadmium, copper, lead, nickel, sulphate, sulphide, zinc; and
- Anthracene, benz[a]anthracene, benzo[a]pyrene, chrysene, fluoranthene, naphthalene, phenanthrene, pyrene.

Substances to be remediated in water for freshwater aquatic life water use:

To meet numerical remediation standards:

- Ammonia, arsenic, cadmium, copper, lead, sulphate, sulphide; and
- Anthracene, benz[a]anthracene, benzo[a]pyrene, chrysene, fluoranthene, naphthalene, phenanthrene, pyrene.

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Alan W. McCammon
For Director, *Environmental Management Act*

Schedule D

Documents

- *Summary of Site Condition*, prepared by Duncan Macdonald, P.Eng., dated Sept 18, 2017;
- *Ecowaste Landfill, 15111 Williams Road, Richmond BC – Record Review Update*, prepared by PGL Environmental Consultants Ltd., May 17, 2017;
- *Release Request – Development Permit Application, 15111 Williams Road, Richmond, BC (PID: 003-475-727 and 003-574-083)*, prepared by Ministry of Environment, November 30, 2016;
- *Release Request – Ecowaste Landfill, 15111 Williams Road, Richmond, BC, Site No.:2404*, prepared by PGL Environmental Consultants Ltd., November 10, 2016;
- *Remediation Plan, Ecowaste Landfill, Richmond, BC*, prepared by PGL Environmental Consultants Ltd., November, 2016;
- *Stage 2 Preliminary and Detailed Site Investigation, Ecowaste Landfill, Richmond, BC*, prepared by PGL Environmental Consultants Ltd., November, 2016;
- *Protocol 6 Approval Application for Relief from Delineation, 15111 Williams Road, Richmond, BC*, prepared by Ministry of Environment, November 10, 2016;
- *Preapproval Application for Relief from Further Horizontal Delineation at MOE Site 2404, Ecowaste Landfill, 15111 Williams Road, Richmond, BC*, prepared by PGL Environmental Consultants Ltd., September 27, 2016;
- *Water Use Determination, 15111 Williams Road, Richmond, BC*, prepared by Ministry of Environment, August 30, 2016;
- *Site-Specific Determination of Water Use*, prepared by PGL Environmental Consultants Ltd., August 4, 2016;
- *Addendum Water Use Determination, Ecowaste Landfill (MOE Site 2404), 15111 Williams Road, Richmond, BC*, prepared by PGL Environmental Consultants Ltd., June 23, 2016.
- *Water Use Determination, Ecowaste Landfill (MOE Site 2404), 15111 Williams Road, Richmond, BC*, prepared by PGL Environmental Consultants Ltd., May 3, 2016;
- *Stage 1 Preliminary Site Investigation, Ecowaste Landfill, Richmond, BC*, prepared by PGL Environmental Consultants Ltd., April 2016.

2017-09-22

Date Issued



Alan W. McCammon
For Director, *Environmental Management Act*



November 30, 2016

Victoria File: 26250-20/0663
Regional File: 26250-20/2404
SITE 2404

VIA EMAIL ONLY: tland@ecowaste.com and wcraig@richmond.ca

Ecowaste Industries Ltd.
100 – 3031 Viking Way
Richmond, BC V6V 1W1
Attention: Thomas Land

City of Richmond
6911 No. 3 Road
Richmond, BC V6Y 2C1
Attention: Wayne Craig

Dear Thomas Land and Wayne Craig:

Re: Release Request – Development Permit Application
15111 Williams Road, Richmond
PIDs: 003-475-727 and 003-574-083

This letter is to acknowledge receipt of the proponent's request for release of the above-referenced development permit application. According to our records, there is an outstanding requirement for a preliminary site investigation for the subject site as outlined in our site profile decision letter dated May 25, 2011. Should contamination be identified, investigation of all environmental media must be conducted until the full extent of contamination is determined at the site and which has migrated from the site. Section 58 and 59 of the Contaminated Sites Regulation describe the requirements for the conduct of preliminary and detailed site investigation and the content of reports based on those investigations.

The ministry has received the following information in support of a release request for the above-referenced application:

1. A written opinion from Duncan Macdonald, Approved Professional, dated November 10, 2016 with the site investigation reports and remediation plan and schedule attached, confirming that:
 - (a) the parcels are not a high risk site;

- (b) all contamination at and migrating from the proponent's parcels has been delineated, except where not physically possible due to landfill controls;
 - (c) remediation of contamination during each phase of development to applicable standards is achievable prior to issuance of an occupancy permit for each phase; and
 - (d) once remediation is complete, each developed area (Phases 1-5) will meet applicable environmental quality standards and criteria in the Regulation and will be eligible for Certificates of Compliance.
2. A commitment in writing from Thomas Land, President and Chief Executive Officer of Ecowaste Industries Ltd, dated November 1, 2016 indicating that the parcels will be remediated in phases and in accordance with the remediation plan.
 3. A letter from Amy Sloma dated August 30, 2016 regarding Water Use Determination at 15111 Williams Road, Richmond, BC.
 4. A letter from Alan McCammon dated November 10, 2016 regarding a Protocol 6 Approval Application for Relief of Delineation at 15111 Williams Road, Richmond, BC.

Based on the information provided, it is understood that the subject parcels will be remediated and redeveloped in five phases. The proposed development plan and a site plan ("Figure 6") outlining the phases are attached for reference. It is also understood that Ecowaste Industries Ltd. (Ecowaste) intends to obtain an Approval in Principle of a remediation plan for the subject parcels in early 2017 and commits to obtaining a Certificate of Compliance for each phase of development prior to issuance of an occupancy permit for each phase (as per the attached schedule).

Considering the above information, the Director is prepared to provide the necessary release so that the City of Richmond may proceed with approval of the development permit application. To that end, please accept this letter as notice pursuant to the *Local Government Act* (section 557(2)(e)), that the City of Richmond may approve the development permit application under this section because the Director has received and accepted a notice of independent remediation with respect to the site.

As a condition of the release and pursuant to section 54(3)(d) of the *Environmental Management Act* (Act), the Director imposes the following requirements on Ecowaste with respect to the site:

1. Ongoing compliance with the Operational Certificate MR-04922 and all associated approved plans, as amended.
2. A Certificate of Compliance for Phase 1 and an Approval in Principle of a remediation plan for the remainder of the site must be obtained prior to issuance of an occupancy permit for Phase 1. A Certificate of Compliance for each subsequent phase (Phases 2-5) must be obtained prior to issuance of an occupancy permit for each phase.

3. A statement by an Approved Professional must be submitted to the Director annually, within 30 days of the anniversary of the date of issue of this letter. The statement shall include the following:
 - a. A summary of remedial activities undertaken during the reporting period; and
 - b. Assessment of overall remediation progress, including evaluation in comparison to the actions and schedule set out in the plan(s) referenced above.
4. Remediation must be confirmed in accordance with applicable legislation and ministry guidance. Within 90 days of completing remediation, a report summarizing confirmation of remediation must be prepared in accordance with section 49 (2) of the Contaminated Sites Regulation and submitted for review by the Director.
5. Remediation of all five phases must be completed within ten years of the date of issue of this letter.

Please be advised of the following:

- The ministry recommends that the proponent review all aspects of the government's contaminated sites legislation and supporting guideline documents and protocols to ensure that all required information is collected and documented during investigation and where necessary, remediation of the site;
- Those persons undertaking site investigations and remediation at contaminated sites in British Columbia are required to do so in accordance with the requirements of the Act and its regulations. The ministry considers these persons responsible for identifying and addressing any human health or environmental impacts associated with the contamination;
- In cases of site demolition, we recommend that a survey of building materials and equipment be undertaken to identify any materials that require special management;
- Under the authority of the Act, all applications eligible under Protocol 6 must be submitted by an Approved Professional via the Contaminated Sites Approved Professional Society. For further clarification of application eligibility please see [Protocol 6, "Eligibility of Applications for Review by Approved Professionals"](#);
- This letter provides authorization for local governments to proceed with approval of specific applications for a site. Aside from the specific relief granted above, it does not constitute review or acceptance by the director of any aspect of the submission requirements for application of a contaminated sites legal instrument under the Protocol 6 review process.
- Fees are applicable for the ministry's contaminated sites services, pursuant to section 9 of the Contaminated Sites Regulation. Information on the government's contaminated sites

legislation and supporting guideline documents and protocols as well as a Contaminated Sites Services Application Form can be obtained from the ministry's Land Remediation web page located at: <http://www.env.gov.bc.ca/epd/remediation/>; and

- Penalties for noncompliance with the contaminated sites requirements of the Act and Regulation are provided in sections 115 and 120(17) of the Act.

Decisions of a Director may be appealed under Part 8 of the Act.

Please contact the undersigned at 604 582-5246 if you have any questions about this letter.

Yours truly,



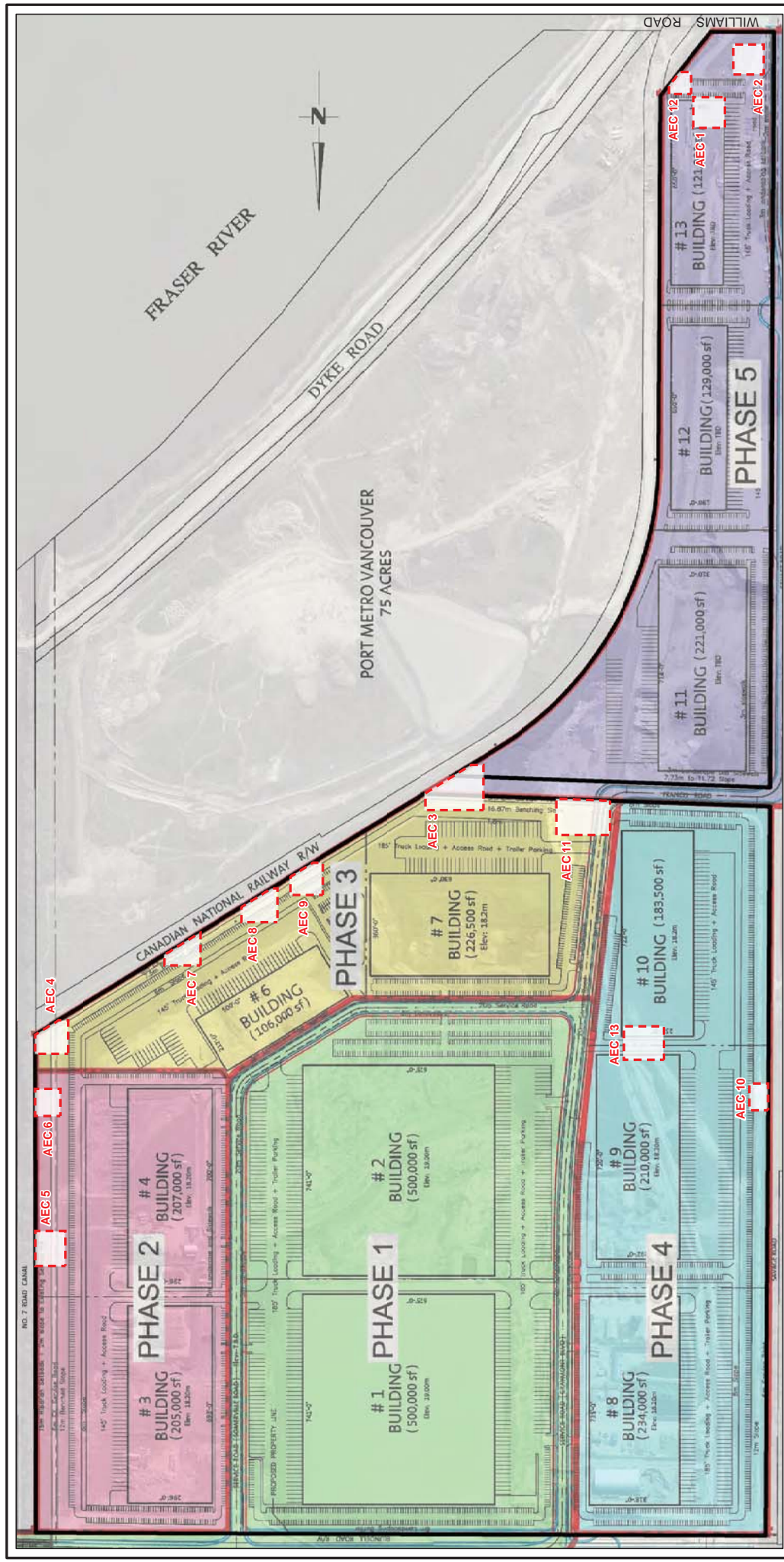
Kelli Larsen
for Director, *Environmental Management Act*

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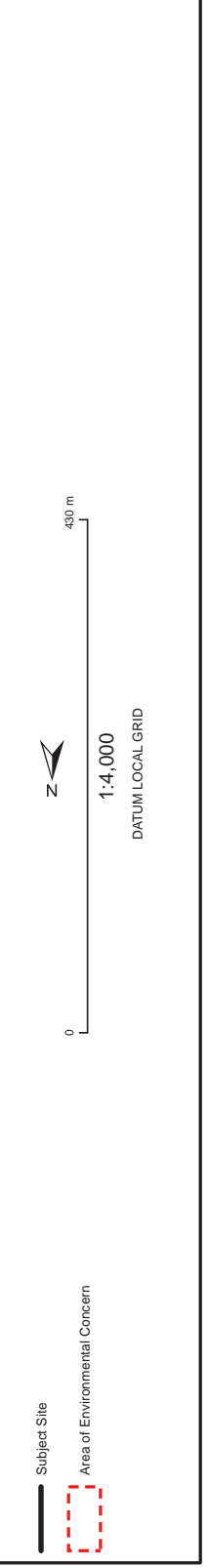
cc: Simone Mol, PGL Environmental Consultants, email: smol@pggroup.com
David Brownlee, City of Richmond, email: dbrownlee@richmond.ca
Janet Barrett, Land Remediation Section
Alan McCammon, Land Remediation Section
Avtar Sundher, Regional Operations Branch

Attach:

1. Figure 6 – Proposed Redevelopment and Remediation Phases
2. Proposed Development Schedule



PROPOSED REDEVELOPMENT AND REMEDIATION PHASES	
15111 Williams Rd, Richmond, BC	
ECOWASTE INDUSTRIES LTD.	
<div> <div> </div> <div> PGL ENVIRONMENTAL CONSULTANTS </div> </div>	<div> <div> File No.: 0079-01-17 Date: JUN 2016 </div> <div> Dwg No.: 060 - S2PSIDS Drawn by: IRB </div> </div>
FIGURE 6	



Attachment 2

Excerpt from ‘Remediation Plan, Ecowaste Landfill, Richmond, BC’ by PGL Environmental Consultants dated November 2016.

6.2 Schedule

The proposed remediation will be completed concurrently with the phased development of the Site. All remediation work within each phase of development (1 to 5) will be completed prior to the construction of any onsite buildings. A CofC will be obtained prior to the occupancy of the building on a given phase. The remediation schedule will follow the Site's development schedule outlined below. Figure 6 shows the phased development and AECs to be remediated.

Table E: Proposed Development Schedule

Phase	Task	Date
Pre-development	Obtain MOE recommendation for Development Permit Release	November/December 2016
1	Remediation not required. Obtain a CofC (metes and bounds).	December 2017
2	Remediate AEC 7, AEC 8, AEC 15, AEC 16. Obtain a CofC (metes and bounds).	2017-2018
3	Remediate AEC 3, AEC 6, AEC 9, AEC 10, AEC 11 and AEC 13. Obtain a CofC (metes and bounds).	2017-2018
4	Remediate AEC 12 and AEC 14. Obtain a CofC (metes and bounds)	2018-2019
5	Remediation of AEC 1, AEC 2 and AEC 4 as part of Panhandle development. Obtain a CofC.	2023-2027

Based on the proposed phased development of the Site, over the next 10 years, an AiP application will be made for the Panhandle and Southern Landfill in January/February 2017. An updated AiP application will be made in 2020 to incorporate the Northern Landfill.

Following the development of each phase, placement of final grade (e.g., mineral fill cap), an Investigation/Confirmation of Remediation Report, and an application for a metes and bounds CofC will be submitted covering that phase.