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AUTHORIZATION

Authorization # 99-HPAC-PA2-000-000217
MELP File # A2004880

AUTHORIZATION FOR WORKS OR UNDERTAKINGS AFFECTING FISH HABITAT

DRAFT

Authorization issued to:

Name: 161884 Canada Inc.: Gloucester Industrial Estates ("Gloucester")

Address: 310 - 1001 West Broadway, Vancouver, B.C., V6H 4B1

s.19(1)

Telephone No.: (604) 856-3156 (attention: [redacted])

Facsimile No.: (604) 856-3384

Location of Project:

Tributaries to West and Nathan creeks within the Gloucester Industrial Estates in Langley, generally encompassing lands north of the Trans-Canada Highway, west of the Langley-Abbotsford boundary, east of 264th Street and south of 60th Avenue.

Valid Authorization Period:

The valid authorization period for the harmful alteration associated with various land development activities is from 01 August, 1999 through 15 September, 2005.

As specified herein, this document only authorizes the destruction of the fish habitat and associated compensatory works until 15 September, 2005. If any phase of the project is not completed by that date, such that fish habitat may be affected, a new application pursuant to Section 35(2) of the Fisheries Act may be required. Should this Authorization expire without the works proceeding, and no alterations to the project design or DFO policy, legislation and/ or guidelines have occurred, an ammendment for an extension to this authorization may be considered.

Description of Works or Undertakings:

The harmful alteration hereby authorized includes a number of undertakings which are listed below and numerically referenced to a plan of existing drainage (refer to ECL Drawing No. 467-02-11, Rev. 02, attached in Appendix A).

In the **Northeast Quadrant** of the development -

Site 1. realignment and permanent elimination of riparian vegetation associated with the fisheries sensitive zone (i.e. relaxation of the setback boundary) adjacent to a

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watercourse;
Site 2. elimination of a watercourse; and,
Site 3. elimination of a ravine, elimination of a portion of a wetland, and permanent elimination of riparian vegetation associated with the fisheries sensitive zone (i.e. relaxation of the setback boundary) adjacent to a wetland.

In the **Southeast Quadrant** of the development -

Site 8. elimination of a watercourse;
Site 9. realignment of a watercourse; and,
Site 10. elimination of a watercourse.

In the **Southwest Quadrant** of the development -

Site 11. elimination of a watercourse;
Site 12. elimination of a watercourse;
Site 13. elimination of a pond;
Site 14. elimination of a pond;
Site 15. elimination of a pond;
Site 16. elimination of a pond and watercourse;
Site 17. realignment of a watercourse;
Site 18. elimination of a watercourse;
Site 19. elimination of a pond and watercourse;
Site 20. elimination of a pond; and,
Site 21. elimination of riparian vegetation.

These works are more specifically described in the following submissions and drawings:

Appendicies:

a). Appendix A: ECL Envirowest Consultants Limited (ECL) Drawing No. 467-02-11, Revision 02 entitled "Existing Drainage" dated August 1999, and ECL Dwg No. 467-02-12, Revision 04 entitled "Ultimate Drainage", dated September 1999;

b). Appendix B: Habitat balance prepared by ECL;

c). Appendix C: The application for Environmental Review submitted by ECL on behalf of 161884 Canada Inc., dated June 8, 1999;

d). Appendix D: ECL Drawing Nos.:
- 467-06-01R (dated March 1999);
- 467-02-09, Revision 00 (dated April 12, 1999);
- 467-04-06, Revision 01 (dated August 27, 1998);
- 467-02-08, Revision 01 (dated September 13, 1999);
- 467-02-10A, Revision 01 (dated August 9, 1999);
- 467-02-10B, Revision 01 (dated August August 9, 1999);

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e). Appendix E: Aplin & Martin Consultants Ltd. Drawing Nos. 96025SR-1, Revision 1; 96025SR-2, Revision 2; and 96025SR-3, Revision 2, all dated May 1997;

f). Appendix F: Hunter Laird Engineering Ltd. Job No. 4518, Plan Nos. C1 of 3, C2 of 3 and C3 of 3, all dated March 1999;

g). Appendix G: Copies of Letters of Credit totalling $100,000.00 and held in trust by DFO until the expiration of this agreement; and,

h). Appendix H: Copies of the restrictive covenant documents, registered in favour of the BC Ministry of Environment, Lands and Parks under Section 219 of the provincial *Land Titles Act*.

i). Appendix I: Gloucester Industrial Estates 1998 Stormwater Management Plan: Final Report by Stantec Consulting Ltd.

Schedules:

Schedule A: DFO/ MELP Riparian Planting Guidelines.

Conditions of Authorization:

1. Gloucester confirms that all plans and specifications relating to this Authorization have been duly prepared and reviewed by appropriate professionals working on behalf of Gloucester. Gloucester acknowledges that it is solely responsible for all design, safety and workmanship aspects of all of the works associated with this Authorization.

2. Gloucester confirms that the location and general design of the works are to be consistent with the information provided to the agencies and that any material deviations from such designs must be reviewed and approved by all agencies having jurisdiction in this matter.

Conditions that relate to works in or near watercourses:

3. Instream works may only be undertaken during the period between 01 August and 15 September of any year of this development. An environmental monitor must be present full time during all instream works, unless otherwise agreed to by DFO and/ or MELP. The environmental monitor must have the authority to alter or halt works should they feel the works are detrimental to fisheries resources. Gloucester must provide a copy of the written authority, providing the name of the environmenal monitor, contact number and a brief outline of relevant experience related to the proposed works to DFO and the City.

   All other works within the fisheries sensitive zones (i.e. setback areas) must be monitored daily during construction and during or following any storm event which may occur during the construction phase.

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The environmental monitor should have experience in stream construction or restoration as well as sediment and erosion control.

4. All instream work must be undertaken and completed in isolation of flowing water. Generally, this is accomplished by diverting, enclosing or pumping the water around the work site. Flow to downstream portions of the stream must not be cut off at any time during construction. In addition, the point of discharge to the creek must be located immediately downstream of the work site.

5. Prior to commencement of instream works, an environmental consultant or other qualified professional who is acceptable to DFO and/ or MELP must conduct a fish and amphibian salvage in and around areas potentially affected by siltation or dewatering. Appropriate fish collection permits must be obtained prior to any instream works commencing. Ensure that the appropriate DFO and MELP staff have been contacted and are advised of the commencment of instream works.

6. Sediment and erosion control measures must be installed to the standards outlined in the B.C. Environment/DFO "Land Development Guidelines for the Protection of Aquatic Habitat". All work must be conducted in a manner that will prevent the release of sediment or sediment-laden water into any watercourse.

   In this regard, a sediment, erosion and runoff control plan must be prepared by a qualified, trained professional and implemented prior to any site preparation works and/ or construction. These facilities must be maintained until the occupancy permit stage, or until no longer applicable to the site conditions. These facilities must be maintained and be working adequately to control discharges from the site.

   All disturbed areas within the leavestrips should be hydroseeded or covered to prevent surface erosion. If work is undertaken late in the growing season, normal seeding may not be effective in preventing surface erosion. In this regard, the entire disturbed area may require stabilization through hydroseeding with heavy mulch or by installing geotextile seed mats.

7. All constructed streambank slopes must not exceed 2:1 slopes (horizontal: vertical). All constructed slopes must be covered with a minimum 6" topsoil, seed mixture and biodegradable geotextile (i.e. coco mat) to ensure stability and a reasonable plant growth medium.

8. Riparian revegetation must be completed in accordance with the specified plans, attached in Appendix D. Any other disturbed areas within the leavestrip areas, which are not included in a specified revegetation plan, must be replanted in accordance with the DFO/ MELP guidelines for riparian revegetation, attached as Schedule A.

9. Machinery is not permitted to work within the wetted perimeter of the stream. All machinery on the site must be in good repair and free of excess oil and grease. No fuels lubricants, construction wastes or other deleterious substances may enter the watercourse

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at any time. Emergency spill kits must be kept on site and be readily accessible at all times in case of release of a deleterious substance to the environment. Any spill of reportable quantities must be immediately reported to the Provincial Emergency Program (24 hour phone line: 1-800-663-3456).

10. All construction materials, such as fill or riprap, must consist of inert materials. Rock used as riprap must be durable and suitably graded to resist movement by stream flow. Rock and/ or riprap placement must be completed so as to ensure their stabililty within the creek system.

11. Topsoil, debris from construction, concrete and/ or concrete leachate, overburden, soil, grout, oil, grease or any other substance deleterious to aquatic life must be disposed of or placed in a manner that will prevent their entry into any watercourse, ravine, floodplain, or storm sewer system.

    In this regard, DFO notes that if any cast in place concrete works are to be undertaken, there may exist high potential for concrete and/ or concrete leachate to enter a watercourse. Concrete leachate is alkaline and highly toxic to fish and aquatic life and DFO requires that measures be taken to prevent any incidence of concrete from entering the watercourse. In case of emergency, a concrete buffer, such as CO_2, must be kept on site to mitigate any impacts from the escape of concrete. To ensure that no concrete or concrete leachate impacts downstream fish or fish habitat, DFO advises that the downstream pH be monitored regularly until completion of the works. If a significant change in pH is noted (i.e. pH below 5.0 or above 9.0), then emergency measures must be implemented to neutralize pH levels. In addition, any concrete that does escape must be cleaned out of the channel immediately. All concrete work must be carried out during dry weather and low water conditions.

12. Any future stream crossings must be clear span bridges or bottomless arch culverts, unless otherwise approved by DFO and MELP. Approval for stream crossings will be considered on a site by site basis.

13. The following personnel must be ***contacted and advised of any instream works*** or works within the fisheries sensitive zone (i.e. setback areas), a minimum of ***five (5) days*** in advance of the commencment of works. In addition, ***DFO and/ or MELP must be contacted for site inspection for any relocated or constructed watercourses prior to the release of water into newly constructed habitat***:

    a) The Fishery Officer in charge of the Fraser Valley West Field Office at tel: (604) 607-4160 or fax: (604) 607-4199;
    b) The DFO Habitat Biologist for the Langley area at tel: (604) 666-6479 or fax: (604) 666-6627 (current contact Suzanne Thorpe); and,
    c) The MELP Fish and Wildlife Habitat Protection Officer for the Langley area at tel: (604) 582-5200 or fax: (604) 930-7119 (current contact John Summers).

14. For any 'individual' project within the specified time period, the environmental monitor must submit three (3) copies of a 'summary' monitoring report to MELP and one (1) to this

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department within 60 days of project completion. As described herein, Site numbers 1 through 21 represent 'individual' projects, as do each of the compensatory sites A through D; however, the sites may be listed and detailed within the same monitor's report, if undertaken at the same time. The monitor's report must indicate that the project has been completed and shall include the following:

a) date-stamped photos of the site(s) before, during and after construction;
b) date-stamped photos of the site post-planting;
c)confirmation of compliance with the Authorization; and,
d) details of any difficulties encountered and how they were handled.

In the event of any significant incident(s) which may occur during works associated with this project (i.e. oil/ gas spill, slope failure, sediment or erosion control problem), the environmental consultant should notify both DFO and MELP representatives as soon as possible. All emergency-reporting procedures must be followed on an immediate basis. The environmental monitor should have an emergency call out procedure in place prior to the commencement of works.

The environmental monitor must post a readily visible sign identifying their company name and telephone number at the entrance(s) to the site.

15. A copy of this Authorization must be forwarded to the contractor/crew supervisor and must be present on the site while work is proceeding.

16. It is understood that by proceeding with the works specified herein, the applicant's agent(s) and/ or contractor(s) and their work crews, shall have indicated an understanding of and agreement to the conditions within this Authorization, and that both DFO and MELP have the authority to inspect, and if necessary, stop any works that are not in compliance with the agreed to terms and conditions or if the agencies have fisheries related concerns.

Conditions relating to stormwater management for development:

17. Design of the stormwater system shall be consistent with final approval of the document "Gloucester Industrial Estates Stormwater Management Plan: Final Report" by Stantec Consulting Ltd. (attached as Appendix I), currently under review. Detailed engineering design of the stormwater system must be reviewed and approved by DFO, MELP and the Township of Langley prior to site development.

18. All first flush flows must be directed through oil/water seperators or an alternative treatment facility, subject to agreement of DFO and/ or MELP. All flows from parking lots and roads will be directed to treatment biofiltration swales to capture oil, grease and grit prior to being connected with the storm system or emptying into any watercourse. Once installed, these facilities must be adequately maintained. The proponent is required to develop a maintenance schedule and form agreement(s) to ensure that maintenance is carried out in perpetuity by the strata or landowner.

19. Stormwater from roof and foundation drains must be directed to to infiltration trenches or

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other retention facilities (i.e. constructed pond or underground pipe storage) in order to recharge groundwater and creek base flows. Detention of stormwater must be built into all master drainage plans, which must be designed to meet or surpass the specifications outlined in the "*Land Development Guidelines for the Protection of Aquatic Habitats*".

20. Stormwater outfalls must be set back at least three (3) meters from the streambank and at an angle of approximately 45 degrees to the direction of stream flow. The outfall channel should be armoured with clean angular rock or other type of energy dissipator and stream bank stabilization, as approved by MELP.

Conditions relating to the Restrictive Covenant/ Leavestrip Area:

21. All leavestrip areas shown on ECL Drawing No. 467-02-12 will be protected by a restrictive covenant and registered against the title of the property(ies) affected under Section 219 of the *Land Titles Act*, as per the requirements of MELP. All leavestrips are to be left in a totally undisturbed, naturally vegetated state in perpetuity. The covenant boundary must be surveyed by a registered BC Land Surveyor and a permanent fence must be constructed at the covenant boundary between development areas and the covenant areas prior to the commencement of any site development, unless otherwise agreed to by MELP.

    After the compensatory habitat is functioning as intended, Gloucester shall not carry on any work or undertaking that will adversely disturb or impact the compensatory habitat, and it will take all reasonable steps to ensure that the compensatory habitat is not disturbed by others, so long as Gloucester is associated with Gloucester Industrial Estates.

22. Buildings must be set back a minimum of five (5) meters from the restrictive covenant boundary in order to protect the root systems of trees within the covenant area. There is to be no excavation, fill, heavy equipment operation or other activities within this root protection zone that will impact the health of riparian vegetation in the covenant area.

Conditions that relate to compensatory habitat:

23. The compensatory habitats shall consist of a number of features which are listed below and numerically referenced to a plan of ultimate drainage (refer to ECL Drawing No. 467-02-12, Revision 03, attached in Appendix A). These works are also described in the Habitat Balance (Appendix B). Design drawings are referenced for each project on the ultimate drainage plan.

24. In the **Northeast Quadrant** of the development -

    Compensatory Site A, located at or near Site 1:

    Enhancement of an existing watercourse, including partial realignment, wetland/pond creation and riparian enhancement (refer to ECL Drawing No. 467-06-01R, dated March 1999). This watercourse discharges to the existing roadside ditch at 60th Avenue, subsequently flowing in a culvert under 60th Avenue.

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Native shrubs shall include a mix of species (minimum size #2 pot) including snowberry, red elderberry, salmonberry, wild current, pussy willow, red-osier dogwood and thimbleberry (no species to consist of more than 20 percent of the total). Live stakes shall be planted at a density of 10 stakes per square metre.

Large woody debris (tree, log and rootwad) placement will be undertaken as directed by the environmental consultant. All large woody debris will be placed in such a manner so as to ensure that they are appropriately keyed into the sides of banks or are otherwise stable. Rootwads should be placed so that the gnarly portions of the root mass are below the wetted perimeter of the creek/ pond area, thus providing maximum refuge cover for juvenile salmonids. Trees and logs must have a minimum butt diameter of 350 mm; rootwads a minimum butt diameter of 1.0 meters.

Marsh planting in the northeast quadrant of the development will be undertaken as per the specifications indicated on ECL Drawing 467-02-10A (species list). All wetland planting will meet the minimum density criteria of 4 plants per square meter. Marsh planting may be undertaken early in the spring planting season post construction, provided that appropriate sediment control measures are undertaken throughout the winter season to prevent downstream sedimentation from such areas. Marsh planting must be completed by April 30, the end of the spring planting season.

In the **Southeast Quadrant** of the development -

Compensatory Site B, located at or near Site 9:

Re-alignment of a watercourse, including development of pools (each with two rootwads) at 30 metre intervals, boulder complexing (minimum 6 boulders per 30 metre interval), and riparian enhancement (refer to ECL Drawing No. 467-02-09, Revision 00, dated April 12, 1999, and Hunter Laird Engineering Ltd. Job No. 4518, Plan Nos. C1 of 3, C2 of 3 and C3 of 3, all dated March 1999).

A 1 metre wide strip on each side of the channel/pools is to be live-staked with a combination of red-osier dogwood and willow at a density of 10 stakes per square metre. Densities for trees and shrubs shall be one per five square metres and one per one square metre, respectively. Trees shall be increased in number to ten percent of total plants. Salvaged plant material may be used as an alternative to nursery stock, provided that it meets the required success rate.

Rip rap is to be deleted from the side slopes of the pools; refer to ECL Dwg. #467-02-09.

Boulder and boulder cluster placement will be undertaken as per the direction of the environmental consultant. Boulder complexing should be undertaken to provide fish habitat, direct flow, promote flushing, prevent infilling and to ensure bank stablization, where necessary. Boulders must be appropriately keyed into the

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sides of banks and placed to ensure they are stable. Boulder diameter may be varied, depending on stream cross-section and gradient, but must average 400mm.

In the **Southwest Quadrant** of the development -

Compensatory Site C, located at or near Site 11:

Pond/wetland creation north of Gloucester Way within the lands designated as future golf course (refer to ECL Drawings 467-02-10A and 467-02-10B).

Wetland plants shall be planted at a density of four plants per square metre and trees and shrubs at densities one per five square metres and one per one square metre, respectively.

The configuration of the constructed habitat may be revised subject to advance notifcation to DFO and completion of a similar or greater amount of habitat.

Large woody debris placement should provide a minimum average of 25% cover in pools/ wetland using either gnarly rootwads and/ or whole tree sections.

Compensatory Site D, located at or near Site 17:

Re-alignment of a watercourse south of Gloucester Way (refer to Aplin & Martin Consultants Ltd. Drawing Nos. 96025SR-1, Revision 1; 96025SR-2, Revision 2; and 96025SR-3, Revision 2). The portion adjacent to Gloucester Way is to be located within a 15-meter wide corridor; habitat details for this portion are shown in ECL Drawing No. 467-04-06, Revision 01. Habitat details for the remaining portions are shown in ECL Drawing No. 467-02-08, Revision 01. Two optional alignments (options 17a and 17b) for the north-south portion are accepted (refer to ECL Drawing No. 467-02-12, Revision 04), having corridor width of 25 meters. Wherever possible, existing trees and shrubs are to be retained along the margins of the new watercourse. Where exisiting vegetation is disturbed it will be re-planted in accordance with the specifications on ECL Drawing No. 467-02-08, Rev 01, and as detailed further herein.

Deflector logs, aeration logs and rootwads shall each be installed in the channel at 10 metre intervals. Boulder clusters, each comprised of a minimum of four boulders of a minimum diameter of 400mm, are to be installed at 5 metre intervals.

A one metre wide strip on each side of the channel is to be live-staked with a combination of red-osier dogwood and willow at a density of 10 stakes per square metre. Densities for trees and shrubs shall be one per five square metres and one per one square metre, respectively. Salvaged plant material may be used as an alternative to nursery stock.

View/ access points around the constructed wetland/ pond areas at the "golf

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course" will be constructed so that access into and around the watercouse is discouraged. If access is or becomes problematic (i.e. interferes with the success of any aspect of the constructed habitat), additional measures may be required to prevent human encroachment into such areas (i.e. low fencing).

Conditions that relate to the monitoring program:

25. For each component of the overall habitat compensation plan, Gloucester shall carry out a monitoring program (the "Monitoring Program") which will extend for five (5) years post-construction and will include the following:

a) If a project only involves disturbance(s) to, or removal of, riparian revegetation, a brief report describing plant survivorship and including photos is required yearly to three (3) years post-planting.

b) an assessment of the physical stability (see details of b) below) of any newly constructed works must be conducted a minimum of two (2) times during the first winter, in November/ December and February/ March. Any problems with any aspect of the functioning of newly constructed habitat must be reported to both DFO and MELP within five (5) working days post-inspection and remediation measures implemented immediately, as approved by DFO and/ or MELP;

c)an annual photographic (date stamped) assessment of the compensation habitat and physical stability of the works, noting any changes in the function of the habitat for five (5) years post-construction. The assessment should also include looking for any evidence of erosion, slumping, tension cracks, movement of instream structures, bed material changes, debris accumulation and sediment transport changes. If gravels have been placed instream, an estimation of gravel depth, noting any changes, should be conducted each time the site is visited;

d) an annual assessment of the planted riparian vegetation for three (3) years post planting. Plant survival must be at least 80% for ground cover, forbs and shrubs and 100% for trees for the duration of the monitoring program. Should this survivorship not be achieved, additional planting is required to be undertaken immediately during the planting season of, or immediately following, the assessment;

e) measurements of water temperature, pH, dissolved oxygen, and rough estimate of water flow should be recorded each time the site is visited for monitoring;

f) for relocated and/ or constructed watercourses and ponds, fish sampling must be undertaken using baited minnow traps, or an acceptable alternative sampling method, a minimum of once annually during the time of year that will maximize potential to determine fish presence;

g) for relocated and/ or constructed watercourses and ponds, assessment of in-stream aquatic invertebrate populations must be undertaken a minimum of once annually during the 2nd (second) and 5th (fifth) years of the five (5) year monitoring program and during the time of year that will yeild maximum diversity and quantity of invertebrate species (usually during the late spring/ early summer). Sampling should be conducted in riffle-type habitats at a minimum of three (3) locations (upper, middle and lower stream reach) if the stream section is 15 meters in length

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or longer; at a minimum of one (1) location if the stream section is less than 15 meters in length. Invertebrates collected are to be counted and identified to the to the Family level. Data from the invertebrate assessment shall be submitted in the monitor's report.

h) the Monitoring Program shall be conducted by a qualified biologist, or other professional who has experience in this area, and who is acceptable to DFO;

i) the provision to DFO of the annual results of the Monitoring Program in a written report, including an as built plan (where applicable), and any other relevant documents and photographs, by the first of December of each year of the Monitoring Program;

i) the fifth years monitoring report for any project shall provide the results of the final year's monitoring and shall summarize the findings of the five years of annual monitoring. The final report will provide a functional assessment of the perfomance of the compensatory habitat and will include photographs fo the constructed compensatory works;

j) should any deficiencies in the compensatory habitat be identified by either DFO and/ or MELP at any time, DFO and/ or MELP will notify Gloucester and/ or agent(s) working on their behalf. Any identified deficiencies with regard to the form or functioning of the compensatory habitat must be addressed in a timely manner, as per the direction of the agency(ies).

k) should the clause in 26 b) be enacted, an additional annual and final monitoring report will be required in the two years following its enactment.

26. The compensatory habitat will be deemed to functioning as intended if, in the opinion of DFO, the habitat is physically stable; it functions as designed, riparian vegetation has achieved the targeted survivorship; that there is sufficient aquatic invertebrate production to function to provide, in the opinion of DFO, sufficient food and nutrients to downstream habitats; and where fish accessible habitat has been constructed, the site functions to provide accessible habitat for salmonids. Following the initial monitoring period, and any extensions thereof, DFO will assess the success of the compensatory habitat and determine whether of not it is functioning as intended, and choose the appropriate course of action as outlined below:

a) the compensatory habitat is functioning as intended and will be self-sustaining without further major remedial work. The Monitoring Program will be terminated; or

b) the compensatory habitat is not functioning as intended. Gloucester shall extend the Monitoring Program, including remedial work, for an additional two years to allow more time for the habitat to become adequately established.

c)the compensatory habitat is not functioning as intended and further remedial work is not likely to rectify the situation. Gloucester shall then carry out alternative compensatory works of similar habitat value within the same watershed and requiring an additional monitoring period.

27. Gloucester shall ensure that the compensatory habitat is functioning as intended for the

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lifetime of Gloucester Industrial Estates. If at any time Gloucester becomes aware that the compensatory habitat is not functioning as intended Gloucester shall carry out any works which are necessary to enable the compensatory habitat to function as designed. If
s.20(1)(b) Gloucester transfers its interest in Gloucester Industrial Estates, and the transferee assumes the obligations of this Authorization in a form satisfactory to DFO, Gloucester shall thereafter be relieved of these obligations.

28. Gloucester has delivered to DFO two Letters of Credit totalling [redacted] valid until the expiration of this agreement.

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The holder of this authorization is hereby authorized under the authority of section 35(2) of the Fisheries Act, R.S.C., 1985, c.F.14, to carry out the work or undertaking described herein.

This authorization is valid only with respect to fish habitat and for no their purposes. It does not purport to release the applicant from any obligation of the permission form or to comply with the requirements of any other regulatory agencies.

DRAFT

Failure to comply with any condition of this authorization may result in charges under the Fisheries Act.

This authorization form should be held on site and work crews should be made familiar with the conditions attached.

Date of issuance: _____, 1999

Approved by: _____
Dale Paterson
Area Chief, Fraser River Division Habitat Unit
Habitat and Enhancement Branch

Gloucester Industrial Estates acknowledges that DFO has consulted with it regarding the terms of this Authorization, and confirms that it has reviewed and understands the terms of this Authorization, and it will comply with them.

Executed by an authorized signatory of Gloucester Industrial Estates on the _____ day of _____, 1999 in the presence of:

_____
Witness (signature)

_____
(print name)

Gloucester Industrial Estates

Per: _____
Authorized signatory

_____
Name

_____
Title

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Fisheries and Oceans

Pêches et Océans

Authorization # 99-HPAC-PA2-000-000217
MELP File #A2004880

AUTHORIZATION FOR WORKS OR UNDERTAKINGS AFFECTING FISH HABITAT

Authorization issued to:

Name: 161884 Canada Inc.: Gloucester Industrial Estates (herein also referred to as "Gloucester")

Address: 310 - 1001 West Broadway, Vancouver, BC V6H 4B1

Contact: [redacted] s.19(1)

Telephone: (604) 856-3156

Facsimile No: (604) 856-3384

Location of Project:

Tributaries to West and Nathan creeks within the Gloucester Industrial Estates in Langley, generally encompassing lands north of the Trans-Canada Highway, west of the Langley-Abbotsford boundary, east of 264th Street and south of 60th Avenue.

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In the Northeast Quadrant of the development -

Site 1. realignment and permanent elimination of riparian vegetation associated with the fisheries sensitive zone (i.e. relaxation of the setback boundary) adjacent to a watercourse;
Site 2. elimination of a watercourse; and,
Site 3. elimination of a ravine, elimination of a portion of a wetland, and permanent elimination of riparian vegetation associated with the fisheries sensitive zone (i.e. relaxation of the setback boundary) adjacent to a wetland.

In the Southeast Quadrant of the development -

Site 8. elimination of a watercourse;
Site 9. realignment of a watercourse;
Site 10. elimination of a watercourse; and,
Site 23. elimination of 5 m of watercourse.

In the Southwest Quadrant of the development -

Site 11. elimination of a watercourse;
Site 12. elimination of a watercourse;
Site 13. elimination of a pond;
Site 14. elimination of a pond;
Site 15. elimination of a pond;
Site 16. elimination of a pond and watercourse;
Site 17. realignment of a watercourse;
Site 18. elimination of a watercourse;
Site 19. elimination of a pond and watercourse;
Site 20. elimination of a pond;
Site 21. elimination of riparian vegetation; and,
Site 22. elimination of a watercourse.

These works are more specifically described in the following submissions and drawings:

Appendices:

a). Appendix A: ECL Envirowest Consultants Limited (ECL) Drawing No. 467-02-11, Revision 03 entitled "Existing Drainage" dated May 2000, and ECL Dwg No. 467-02-12, Revision 05 entitled "Ultimate Drainage", dated May 2000;

b). Appendix B: Habitat balance prepared by ECL;

c). Appendix C: The application for Environmental Review submitted by ECL on behalf of

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161884 Canada Inc., dated June 8, 1999;

d). Appendix D: ECL Drawing Nos.:
- 467-06-01R (dated March 1999);
- 467-02-09, Revision 00 (dated April 12, 1999);
- 467-04-06, Revision 01 (dated August 27, 1998);
- 467-02-08, Revision 01 (dated September 13, 1999);
- 467-02-10A, Revision 01 (dated August 9, 1999);
- 467-02-10B, Revision 01 (dated August 9, 1999);
- 467-02-13, Revision 00 (dated May 8, 2000);
- 467-02-14, Revision 00 (dated May 8, 2000);
- 467-02-15, Revision 00 (dated May 8, 2000);
- 467-02-16, Revision 00 (dated May 8, 2000);
- 467-02-17, Revision 00 (dated May 8, 2000).

e). Appendix E: Aplin & Martin Consultants Ltd. Drawing Nos. 96025SR-1, Revision 1; 96025SR-2, Revision 2; and 96025SR-3, Revision 2, all dated May 1997;

f). Appendix F: Hunter Laird Engineering Ltd. Job No. 4518, Sheets 9 of 14 and 10 of 14, both Revision A and dated July 29, 1999.

g). Appendix G: Copies of Letters of Credit totalling $100,000.00 and the Letter of Credit Reduction Schedule;

h). Appendix H: Copies of the restrictive covenant documents, registered in favour of the BC Ministry of Environment, Lands and Parks under Section 219 of the provincial Land Titles Act;

i). Appendix I: Gloucester Industrial Estates 1998 Stormwater Management Plan: Final Report by Stantec Consulting Ltd.

Schedules:

Schedule A: DFO/ MELP Riparian Planting Guidelines.

Conditions of Authorization:

1. Gloucester confirms that all plans and specifications relating to this Authorization have been duly prepared and reviewed by appropriate professionals working on behalf of Gloucester. Gloucester acknowledges that it is solely responsible for all design, safety and workmanship aspects of all of the works associated with this Authorization.

2. Gloucester confirms that the location and general design of the works are to be consistent with the information provided to the agencies and that any material deviations from such designs must be reviewed and approved by all agencies having jurisdiction in this matter.

3. The conditions of this Authorization notwithstanding, DFO may at any time and at their

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sole discretion, direct the Gloucester and/ or their agents and/ or contractors, to suspend or alter any work or activity associated with this project, to avoid or mitigate adverse impacts to fisheries resources. Further, DFO may at any time and at their sole discretion direct the Gloucester and/or their agents and/ or their contractors, to carry out at the Gloucester's own expense any works or activities deemed necessary by DFO to avoid or mitigate adverse impacts to fisheries resources.

4. DFO must be notified of any future modifications to the existing drawings referred to in this Authorization and upon notification, may require plans and specifications to review and/ or approve prior to any work commencing.

Conditions that relate to works in or near watercourses:

5. Instream works may only be undertaken during the period between 01 August and 15 September of any year of this development. Any extensions to the work window will be considered on a case by case basis (season and weather dependent) and must have approval for extension from DFO and/ or MELP. An environmental monitor must be present full time during all instream works, unless otherwise agreed to by DFO and/ or MELP. The environmental monitor must have the authority to alter or halt works should they feel the works are detrimental to fisheries resources. Gloucester must provide a copy of the written authority, providing the name of the environmental monitor, contact number and a brief outline of relevant experience related to the proposed works to DFO, MELP and the Township.

6. All other works within the fisheries sensitive zones (i.e. setback areas) must be monitored daily during construction and during or following any storm event which may occur during the construction phase.

7. The environmental monitor must have experience in stream construction or restoration as well as sediment and erosion control.

8. All instream work must be undertaken and completed in isolation of flowing water. Generally, this is accomplished by diverting, enclosing or pumping the water around the work site. Flow to downstream portions of the stream must not be cut off at any time during construction. In addition, the point of discharge to the creek must be located immediately downstream of the work site.

9. Prior to commencement of instream works, an environmental consultant or other qualified professional who is acceptable to DFO and/ or MELP must conduct a fish and amphibian salvage in and around areas potentially affected by siltation or de-watering. Appropriate fish collection permits must be obtained prior to any instream works commencing. The consultant/monitor must ensure that the appropriate DFO and MELP staff have been contacted and are advised of the commencement of instream works.

10. Sediment and erosion control measures must be installed to the standards outlined in the BC Environment/DFO "Land Development Guidelines for the Protection of Aquatic Habitat". All work must be conducted in a manner that will prevent the release of sediment or sediment-laden water into any watercourse.

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In this regard, a sediment, erosion and runoff control plan must be prepared by a qualified, trained professional and implemented prior to any site preparation works and/ or construction. These facilities must be maintained until the occupancy permit stage, or until no longer applicable to the site conditions. These facilities must be maintained and be working adequately to control discharges from the site.

11. All disturbed areas within the leavestrips should be hydro-seeded or covered to prevent surface erosion. If work is undertaken late in the growing season, normal seeding may not be effective in preventing surface erosion. In this regard, the entire disturbed area may require stabilization through hydro-seeding with heavy mulch or by installing geotextile seed mats.

12. All constructed streambank slopes must not exceed 2:1 slopes (horizontal: vertical). All constructed slopes must be covered with a minimum 6" topsoil to ensure a reasonable plant growth medium, and an appropriate native seed mixture and biodegradable geotextile or hydro-seed (if deemed necessary by a qualified professional) to ensure stability.

13. Riparian revegetation must be completed in accordance with the specified plans, attached in Appendix D. Any other disturbed areas within the leavestrip areas, which are not included in a specified revegetation plan, must be replanted in accordance with the DFO/ MELP guidelines for riparian revegetation, attached as Schedule A.

14. Machinery is not permitted to work within the wetted perimeter of the stream. All machinery on the site must be in good repair and free of excess oil and grease. No fuels lubricants, construction wastes or other deleterious substances may enter the watercourse at any time. Emergency spill kits must be kept on site and be readily accessible at all times in case of release of a deleterious substance to the environment. Any spill of reportable quantities must be immediately reported to the Provincial Emergency Program (24 hour phone line: 1-800-663-3456).

15. All construction materials, such as fill or riprap, must consist of inert materials. Rock used as riprap must be durable and suitably graded to resist movement by stream flow. Rock and/ or riprap placement must be completed so as to ensure their stability within the creek system.

16. Topsoil, debris from construction, concrete and/ or concrete leachate, overburden, soil, grout, oil, grease or any other substance deleterious to aquatic life must be disposed of or placed in a manner that will prevent their entry into any watercourse, ravine, floodplain, or storm sewer system.

    In this regard, DFO notes that if any cast in place concrete works are to be undertaken, there may exist high potential for concrete and/ or concrete leachate to enter a watercourse. Concrete leachate is alkaline and highly toxic to fish and aquatic life and DFO requires that measures be taken to prevent any incidence of concrete from entering the watercourse. In case of emergency, a concrete buffer, such as CO2, must be kept on site to mitigate any impacts from the escape of concrete. To ensure that no concrete or concrete leachate impacts downstream fish or fish habitat, DFO advises that the downstream pH be monitored regularly until completion of the works. If a significant change in pH is noted (i.e. pH below 5.0 or above 9.0), then emergency measures must

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be implemented to neutralize pH levels. In addition, any concrete that does escape must be cleaned out of the channel immediately. All concrete work must be carried out during dry weather and low water conditions.

17. Any future stream crossings must be clear span bridges, bottomless arch culverts, or oversized culverts with a minimum 300-mm depth of gravels throughout, unless otherwise approved by DFO and MELP. Approval for stream crossings will be considered on a site by site basis.

18. ***The following personnel must be contacted and advised of any instream works or works within the fisheries sensitive zone (i.e. setback areas), a minimum of five (5) days in advance of the commencement of works***. In addition, DFO and/ or MELP must be contacted for site inspection for any relocated or constructed watercourses prior to the release of water into newly constructed habitat:

    a) The Fishery Officer in charge of the Fraser Valley West Field Office at tel: (604) 607-4160 or fax: (604) 607-4199;
    b) The DFO Habitat Biologist for the Langley area at tel: (604) 666-6310 or fax: (604) 666-6627 (current contact Suzanne Thorpe); and,
    c) The MELP Fish and Wildlife Habitat Protection Officer for the Langley area at tel: (604) 582-5239 or fax: (604) 930-7119 (current contact John Summers).

19. For any 'individual' project completed within the specified time period, the environmental monitor must submit three (3) copies of a 'summary' monitoring report to MELP and one (1) to this Department within 90 days of project completion.

    As described herein, Site numbers 1 through 23 represent 'individual' projects, as do each of the compensatory sites A through D; however, the sites may be listed and detailed within the same monitor's report, if undertaken within the same calendar year. The monitor's report must indicate that the project has been completed and shall include the following:

    a) a complete list of all outstanding or incomplete works for any 'project' as defined herein;
    b) date-stamped photos of the site(s) before, during and after construction;
    c) date-stamped photos of the site post-planting;
    d) confirmation of compliance with the Authorization; and,
    e) details of any difficulties encountered and how they were handled.

20. In the event of any significant incident(s) which may occur during works associated with this project (i.e. oil/ gas spill, slope failure, sediment or erosion control problem), the environmental consultant should notify both DFO and MELP representatives as soon as possible. All emergency-reporting procedures must be followed on an immediate basis. The environmental monitor should have an emergency call out procedure in place prior to the commencement of works.

21. The environmental monitor must post a readily visible sign identifying their company name and telephone number at the entrance(s) to the site.

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22. ***A copy of this Authorization must be forwarded to all contractors and/or crew supervisors and must be present on the site while work is proceeding.***

23. ***It is understood that by proceeding with the works specified herein, the applicant's agent(s) and/ or contractor(s) and their work crews, shall have indicated an understanding of and agreement to the conditions within this Authorization, and that both DFO and MELP have the authority to inspect, and if necessary, stop any works that are not in compliance with the agreed to terms and conditions or if the agencies have fisheries related concerns.***

Conditions relating to stormwater management for development:

24. Design of the stormwater system shall be consistent with final approval of the document "Gloucester Industrial Estates Stormwater Management Plan: Final Report" by Stantec Consulting Ltd. (attached as Appendix I), currently under review. Detailed engineering design of the stormwater system must be reviewed and approved by DFO, MELP and the Township of Langley prior to site development.

25. Water treatment shall be provided for all areas not zoned or developed for industrial purposes as at May 1, 2000. Treatment will occur in first-flush treatment wetlands where feasible, while other areas will be treated by on-site oil-water separators. Envirowest Drawing No. 467-02-13 indicates treatment type for all lands within Gloucester Estates. Envirowest Drawing Nos. 467-02-14, 467-02-15, 467-02-16 and 467-02-17 provide details for first-flush treatment wetlands.

26. Stormwater from most of the Gloucester Estates development will be detained in two large detention features to be located within the golf course. Properties downstream, or outside of the catchments of these two areas must provide onsite detention that meets or surpasses the specifications outlined in the "Land Development Guidelines for the Protection of Aquatic Habitats".

27. Stormwater outfalls must be set back at least three (3) metres from the streambank and at an angle of approximately 45 degrees to the direction of stream flow. The outfall channel should be armoured with clean angular rock or other type of energy dissipater and stream bank stabilization, as approved by MELP.

Conditions relating to the Restrictive Covenant/ Leavestrip Area:

28. All leavestrip areas shown on ECL Drawing No. 467-02-12 will be protected by a restrictive covenant to be registered against the title of the property(ies) affected under Section 219 of the Land Titles Act, as per the requirements of MELP. All leavestrips are to be left in a totally undisturbed, naturally vegetated state in perpetuity. The covenant boundary must be surveyed by a registered BC Land Surveyor and a permanent fence must be constructed at the covenant boundary between development areas and the covenant areas prior to the commencement of any site development, unless otherwise agreed to by MELP.

29. After the compensatory habitat is functioning as intended, Gloucester shall not carry on any work or undertaking that will adversely disturb or impact the compensatory habitat,

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and it will take all reasonable steps to ensure that the compensatory habitat is not disturbed by others, so long as Gloucester is associated with Gloucester Industrial Estates.

30. Buildings must be set back a minimum of one and one-half (1.5) metres from the restrictive covenant boundary, except to the north of the railway tracks where buildings are to be setback a minimum of five (5.0) metres from the restrictive covenant boundary.

Conditions that relate to all mitigatory and compensatory habitats:

31. The compensatory habitats shall consist of a number of features which are listed below and numerically referenced to a plan of ultimate drainage (refer to ECL Drawing No. 467-02-12, Revision 03, attached in Appendix A). These works are also described in the Habitat Balance (Appendix B). Design drawings are referenced for each project on the ultimate drainage plan.

In the Northeast Quadrant of the development -

Compensatory Site A, located at or near Site 1:

- Enhancement of an existing watercourse, including partial realignment, wetland/pond creation and riparian enhancement (refer to ECL Drawing No. 467-06-01R, dated March 1999). This watercourse discharges to the existing roadside ditch at 60th Avenue, subsequently flowing in a culvert under 60th Avenue.

- Native shrubs shall include a mix of species (minimum size #2 pot) including snowberry, red elderberry, salmonberry, red-flower currant, pussy willow, red-osier dogwood and thimbleberry (no species to consist of more than 20 percent of the total). Live stakes shall be planted at a density of 5 stakes per square metre.

- Large woody debris (tree, log and rootwad) placement will be undertaken as directed by the environmental consultant. All large woody debris will be placed in such a manner so as to ensure that they are appropriately keyed into the sides of banks or are otherwise stable. Rootwads should be placed so that the gnarly portions of the root mass are below the wetted perimeter of the creek/ pond area, thus providing maximum refuge cover for juvenile salmonids. Trees and logs must have a minimum diameter of 350 mm; rootwads a minimum diameter of 2.0 metres.

- Marsh planting in the northeast quadrant of the development will be undertaken as per the specifications indicated on ECL Drawing 467-02-10A (species list). All wetland planting will meet the minimum density criteria of 4 plants per square metre. Marsh planting may be undertaken early in the spring planting season post construction, provided that appropriate sediment control measures are undertaken throughout the winter season to prevent downstream sedimentation from such areas. Marsh planting must be completed by April 30, the end of the spring planting season.

In the Southeast Quadrant of the development -

Compensatory Site B, located at or near Site 9:

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- Re-alignment of a watercourse, including development of pools (each with two rootwads) at 30 metre intervals, boulder complexing (minimum 6 boulders per 30 metre interval), and riparian enhancement (refer to ECL Drawing No. 467-02-09, Revision 00, dated April 12, 1999, and Hunter Laird Engineering Ltd. Job No. 4518, Sheets 9 of 14 and 10 of 14, both Revision A and dated July 29, 1999.

- A 1 metre wide strip on each side of the channel/pools is to be live-staked with a combination of red-osier dogwood and willow at a density of 5 stakes per square metre. Densities for trees and shrubs shall be one per five square metres and one per one square metre, respectively. Trees shall be increased in number to ten percent of total plants. Salvaged plant material may be used as an alternative to nursery stock, provided that it meets the required success rate.

- Rip rap is to be deleted from the side slopes of the pools; refer to ECL Dwg. #467-02-09.

- Boulder and boulder cluster placement will be undertaken as per the direction of the environmental consultant. Boulder complexing should be undertaken to provide fish habitat, direct flow, promote flushing, prevent infilling and to ensure bank stabilization, where necessary. Boulders must be appropriately keyed into the sides of banks and placed to ensure they are stable. Boulder diameter may be varied, depending on stream cross-section and gradient, but must average 400mm.

In the Southwest Quadrant of the development -

Compensatory Site C, located at or near Site 11:

- Pond/wetland creation north of Gloucester Way within the lands designated as future golf course (refer to ECL Drawings 467-02-10A and 467-02-10B).

- Wetland plants shall be planted at a density of four plants per square metre and trees and shrubs at densities one per five square metres and one per one square metre, respectively.

- The configuration of the constructed habitat may be revised subject to advance notification to DFO and completion of a similar or greater amount of habitat.

- Large woody debris placement should provide a minimum average of 25% cover in pools/ wetland using either gnarly rootwads and/ or whole tree sections.

Compensatory Site D, located at or near Site 17:

- Re-alignment of a watercourse south of Gloucester Way (refer to Aplin & Martin Consultants Ltd. Drawing Nos. 96025SR-1, Revision 1; 96025SR-2, Revision 2; and 96025SR-3, Revision 2). The portion adjacent to Gloucester Way is to be located within a 15-metre wide corridor; habitat details for this portion are shown in ECL Drawing No. 467-04-06, Revision 01. Habitat details for the remaining portions are shown in ECL Drawing No. 467-02-08, Revision 01. The north-south portion is to be constructed with a corridor width of 25 metres. Wherever possible, existing trees and

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shrubs are to be retained along the margins of the new watercourse. Where existing vegetation is disturbed it will be re-planted in accordance with the specifications on ECL Drawing No. 467-02-08, Rev 01, and as detailed further herein.

- Deflector logs, aeration logs and rootwads shall each be installed in the channel at 10 metre intervals. Boulder clusters, each comprised of a minimum of four boulders of a minimum diameter of 400mm, are to be installed at 5 metre intervals.

- A one metre wide strip on each side of the channel is to be live-staked with a combination of red-osier dogwood and willow at a density of 5 stakes per square metre. Densities for trees and shrubs shall be one per five square metres and one per one square metre, respectively. Salvaged plant material may be used as an alternative to nursery stock.

- View/ access points around the constructed wetland/ pond areas at the "golf course" will be constructed so that access into and around the watercourse is discouraged. If access is or becomes problematic (i.e. interferes with the success of any aspect of the constructed habitat), additional measures may be required to prevent human encroachment into such areas (i.e. low fencing).

Conditions that relate to the monitoring/ evaluation program:

32. For each component of the overall habitat compensation plan, Gloucester shall carry out a monitoring program (the "Monitoring Program") which will extend for five (5) years post-construction and will include the following:

a) if a project only involves disturbance(s) to, or removal of, riparian revegetation, a brief report describing plant survivorship and including photos is required yearly to three (3) years post-planting.

b) an assessment of the physical stability (see details of b) below) of any newly constructed works must be conducted a minimum of two (2) times during the first winter, in November/ December and February/ March. Any non-compliance issues or other problems with any aspect of the functioning of newly constructed habitat or that may have a negative impact to fisheries resources (e.g. erosion, slope failures) must be reported to both DFO and MELP within five (5) working days post-inspection and remediation measures implemented immediately, as approved by DFO and/ or MELP;

c) an annual photographic (date stamped) assessment of the compensation habitat and physical stability of the works, noting any changes in the function of the habitat for five (5) years post-construction. The assessment should also include looking for any evidence of erosion, slumping, tension cracks, movement of instream structures, bed material changes, sediment or debris accumulation and sediment transport changes. If gravels have been placed instream, an estimation of gravel depth, noting any changes, should be conducted each time the site is visited;

d) an annual assessment of the planted riparian vegetation for three (3) years post planting. Plant survival must be at least 80% for ground cover, forbs and shrubs

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and 100% for trees for the duration of the monitoring program. Should this survivorship not be achieved, additional planting is required to be undertaken immediately during the planting season of, or immediately following, the assessment;

e) measurements of water temperature, pH, dissolved oxygen, and rough estimate of water flow should be recorded each time the site is visited for monitoring;

f) for relocated and/ or constructed watercourses and ponds, fish sampling must be undertaken using baited minnow traps, or an acceptable alternative sampling method, a minimum of once annually during the time of year that will maximize potential to determine fish presence;

g) for relocated and/ or constructed watercourses and ponds, assessment of in-stream aquatic invertebrate populations must be undertaken a minimum of once annually during the 2nd (second) and 5th (fifth) years of the five (5) year monitoring program and during the time of year that will yield maximum diversity and quantity of invertebrate species (usually during the late spring/ early summer). Sampling should be conducted in riffle-type habitats at a minimum of three (3) locations (upper, middle and lower stream reach) if the stream section is 15 meters in length or longer; at a minimum of one (1) location if the stream section is less than 15 meters in length. Invertebrates collected are to be counted and identified to the to the Family level. Data from the invertebrate assessment shall be submitted in the monitor's report.

h) the Monitoring Program shall be conducted by a qualified biologist, or other professional who has experience in this area, and who is acceptable to DFO;

i) the provision to DFO of the annual results of the Monitoring Program in a written report, including an as built plan (where applicable), and any other relevant documents and photographs, by the first of December of each year of the Monitoring Program;

j) the fifth years monitoring report for any project shall provide the results of the final year's monitoring and shall summarize the findings of the five years of annual monitoring. The final report will provide a functional assessment of the performance of the compensatory habitat and will include photographs of the constructed compensatory works;

k) should any deficiencies in the compensatory habitat be identified by Gloucester, the environmental monitor, any agents or contractors working on behalf of Gloucester, DFO and/ or MELP, the parties shall notify one another in a timely manner. Any identified deficiencies with regard to the form or functioning of the compensatory habitat must be addressed in a timely manner and communicated in writing to DFO and/ or MELP, and resolved as per their direction.

l) should the clauses in 33 b) or c) be enacted, an additional annual and final monitoring report will be required in the two years following its enactment.

33. The compensatory habitat will be deemed to functioning as intended if, in the opinion of

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DFO,

- the habitat is physically stable;
- it functions as designed,
- riparian vegetation has achieved the targeted survivorship;
- that there is sufficient aquatic invertebrate production to function to provide, in the opinion of DFO, sufficient food and nutrients to downstream habitats; and,
- where fish accessible habitat has been constructed, the site functions to provide accessible habitat for salmonids.

Following the initial monitoring period, and any extensions thereof, DFO will assess the success of the compensatory habitat and determine whether of not it is functioning as intended, and choose the appropriate course of action as outlined below:

a) the compensatory habitat is functioning as intended and will be self-sustaining without further major remedial work. The Monitoring Program will be terminated; or

b) the compensatory habitat is not functioning as intended. Gloucester shall extend the Monitoring Program, including remedial work, for a minimum of an additional two years to allow more time for the habitat to become adequately established;

c) the compensatory habitat is not functioning as intended and further remedial work is not likely to rectify the situation. Gloucester shall then carry out alternative compensatory works of similar habitat value within the same watershed and requiring an additional monitoring period.

34. Gloucester shall ensure that the compensatory habitat is functioning as intended for the lifetime of Gloucester Industrial Estates. If at any time Gloucester becomes aware that the compensatory habitat is not functioning as intended Gloucester shall carry out any works which are necessary to enable the compensatory habitat to function as designed. If Gloucester transfers its interest in Gloucester Industrial Estates, and the transferee assumes the obligations of this Authorization in a form satisfactory to DFO, Gloucester shall thereafter be relieved of these obligations.

s.20(1)(b)

35. Gloucester has delivered to DFO two Letters of Credit totalling [redacted] These Letters of Credit are to be reduced in accordance with the Letter of Credit Reduction Schedule (refer to Appendix G).

36. If the conditions of this Authorization are not met, DFO may draw upon the letters of credit to ensure that the agreed upon terms and conditions of this Authorization are duly carried out.

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The holder of this authorization is hereby authorized under the authority of section 35(2) of the Fisheries Act, R.S.C., 1985, c.F.14, to carry out the work or undertaking described herein.

This authorization is valid only with respect to fish habitat and for no other purposes. It does not purport to release the applicant from any obligation to obtain permission form or to comply with the requirements of any other regulatory agencies.

Failure to comply with any condition of this authorization may result in charges under the Fisheries Act.

This authorization form should be held on site and work crews should be made familiar with the conditions attached.

Date of issuance: August _____, 2000

Approved by: _____
Dale Paterson

Title: Area Chief, Fraser River Division Habitat Unit
Habitat and Enhancement Branch

161884 Canada Inc. (Gloucester) acknowledges that Fisheries and Oceans Canada has consulted with it regarding the terms of this Authorization, and confirms that it has reviewed and understands the terms of this Authorization, and it will comply with them.

Executed by an authorized signatory of 161884 Canada Inc. on the _____th/nd day of August, 2000 in the presence of:

161884 Canada Inc. (Gloucester)

_____
Witness (signature)

Per: _____
Authorized signatory

_____
Name (print):

_____
Name (print)

_____
Title (print):

_____
Title (print)

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AMENDMENT

To

DFO Authorization No: 99-HPAC-PA2-000-000217
BCE File No. A2004880

s.19(1)

AUTHORIZATION FOR WORKS OR UNDERTAKINGS AFFECTING FISH HABITAT

Authorization Amendment issued to:

Name: ~~Greystone Properties Ltd~~BC Hydro and Power Authority

Address: 14245 –56th Avenue, Surrey, B.C. V3X 3A29th ~~Floor, 1190 Hornby Street, Vancouver, B.C. V6Z 2K5~~

Contact: [redacted] BC Hydro/ [redacted] Gloucester Industrial Estates

Telephone No: (604) 528-2103/ (604) 856-3156 ~~(604) 688 - 9460~~

Location of Project:

Within Gloucester Industrial Estates in the Township of Langley, adjacent to the new BC Hydro Gloucester Estates Substation near 272nd Street and 60th Avenue.

Valid Authorization Period:

The valid authorization period for the harmful alteration associated with the works is from December 1, 2001 to September 15, 2005.

Amended Conditions of Authorization:

Amended Conditions that relate to compensatory/mitigatory habitat:

Condition 13

All leavestrip areas shown on ECL Drawing No. 467-02-12 will be protected by a Restrictive Covenant to be registered against the title of the propert(ies) affected under Section 219 of the Land Titles Act, as per the requirements of MELP. All leavestrips are to be left in a totally undisturbed, naturally vegetated state in perpetuity. The covenant boundary must be surveyed by a registered BC Land Surveyor and a permanent fence must be constructed at the covenant boundary between development areas and the covenant areas prior to the commencement of any site development, unless otherwise agreed to by MELP.

Modification to Condition 13

The above condition 13 is hereby modified to permit BC Hydro to complete tree removal works within the Restrictive Covenant area, as per the letter from BC Hydro to Fisheries and Oceans Canada ([redacted] *to Thorpe)*, dated 24 July 2001 (attached to the Authorization Amendment as Appendix 1). BC Hydro will provide replacement trees and riparian shrub

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planting for the purposes of augmenting the existing riparian vegetation of the adjacent fish and wildlife enhancement area, as well as screening the substation within the 3.5m buffer.

The above condition 13 is also hereby modified to permit BC Hydro to complete vegetative maintenance works adjacent to the access road on their property for the sole purpose of ensuring the safety of staff and substation/ plant operations, specifically including the pruning of tree branches and/ or the removal of hazard trees. All maintenance activities undertaken by BC Hydro shall be completed in accordance with the draft MOU between DFO and BC Hydro, entitled "Approved Work Practices for Managing Riparian Vegetation". If or when the MOU is endorsed, the MOU shall provide the terms and conditions for riparian vegetation maintenance within the Restrictive Covenant area that may be undertaken by BC Hydro and its crews or contractors.

Conditions of the Authorization Amendment:

BC Hydro shall ensure that all the terms and conditions of the original Fisheries and Oceans Canada Authorization 99-HPAC-PA2-000-000217 (Gloucester Industrial Estates) are complied with.

The terms and conditions of the Authorization Amendment withstanding, Fisheries and Oceans Canada (DFO) may at any time and at their sole discretion acting reasonably, direct the BC Hydro, and their consultants, to suspend or alter works and activities associated with the vegetation removal and future maintenance. Further, DFO may at any time and at their sole discretion acting reasonably, direct the BC Hydro, and their consultants, to carry out at their own expense any works or activities deemed necessary by DFO to avoid or mitigate adverse impacts to fish habitat.

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The holder of this Authorization Amendment is hereby Authorized under the authority of section 35(2) of the Fisheries Act, R.S.C., 1985, c. F. 14, to carry out the work or undertaking described herein.

This Authorization Amendment is valid only with respect to fish habitat and for no other purposes. It does not purport to release the applicant from any obligation to obtain permission from or to comply with the requirements of any other regulatory agencies.

Failure to comply with any condition of this Authorization Amendment may result in charges under the Fisheries Act.

This Authorization Amendment should be attached to Authorization 98-HPAC-PA2-000-000041and held on site and work crews should be made familiar with the conditions of this Authorization Amendment.

Date of issuance:

Approved by: _____
Dale Paterson

Title: Area Chief, Lower Fraser River Division Habitat Unit
Habitat and Enhancement Branch
Lower Fraser
Fisheries and Oceans Canada

BC Hydro and Gloucester Industrial Estates ~~Properties Ltd~~acknowledge that DFO has consulted with them regarding the terms of this Authorization Amendment, and confirms that they have reviewed and understand the terms of this Authorization Amendment, and they will comply with them.

Executed by an Authorized signatory of BC Hydro on the_____day of _____, 2000 in the presence of:

_____
Witness (Signature)

_____
Name (Print)

_____
Title (Print)

BC Hydro

Per: _____
Authorized signatory

_____
Name (Print)

_____
Title (Print)

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Executed by an Authorized signatory of Gloucester Industrial Estates on the day of _____, 2000 in the presence of:	)	Gloucester Industrial Estates
_____	)	Per: _____
Witness (Signature)	)	Authorized signatory
_____	)	_____
Name (Print name)	)	Name (Print)
_____	)	_____
Title (Print)	)	Title (Print)

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1999- LANGLEY 97-HPAC-PA2-000-000217 97-HPAC-PA2-0150 97-HPAC-PA2-023 # 000034

envirowest environmental resource professionals

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February 1, 2002

HABITAT MANAGEMENT
FEB - 8 2002
FRASER RIVER DIVISION

Fisheries and Oceans Canada
Habitat and Enhancement Branch
100 Annacis Parkway
Delta, BC
V3M 6A2

Attn.: Ms. Suzanne Thorpe
Habitat Biologist

RE: GLOUCESTER INDUSTRIAL ESTATES

The enclosed report consists of environmental monitoring and post construction monitoring of constructed habitats associated with Gloucester Industrial Estates. The report addresses Condition #19 of the Section 35(2) Fisheries Act Authorization No. 99-HPAC-PA2-000-000217 for habitats constructed in the years 2000 and 2001, and Condition #14 (a) through (e) and Condition #15 (a) through (d) of the Section 35(2) Fisheries Act Authorization Nos. 97-HPAC-PA2-0150 and 97-HPAC-PA2-023-000034, respectively, for the habitats constructed in 1997. The enclosed report is comprised of the following components:

1. Environmental monitoring report for habitats constructed in 2000;
2. Environmental monitoring report for habitats constructed in 2001;
3. Post construction monitoring report for habitat constructed on a tributary to West Creek, 150 metres upstream of 58 Avenue and east of 268 Street; and
4. Post construction monitoring report for habitats constructed in association with realignment works on Canal #3 and Canal #4 north and south of Gloucester Way.

The report brings Gloucester Industrial Estates up to date with respect to reporting obligations associated with the above referenced Fisheries Act Authorizations.

Please contact [redacted] or the undersigned at 604-451-0505 if you have any comments or questions regarding the contents of the enclosed report.

Sincerely,
ECL ENVIROWEST CONSULTANTS LIMITED

Q: LOC returns?

[redacted]

[redacted]

copy: Anne Waskett-Myers [redacted]
Ministry of Water, Land and Air Protection
Gloucester Industrial Estates

ECL ENVIROWEST CONSULTANTS LIMITED
Suite 130 - 3700 North Fraser Way
Burnaby, B.C. V5J 5J4
voice: (604) 451-0505
facsimile: (604) 451-0557
admin@ecl-envirowest.bc.ca

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GLOUCESTER INDUSTRIAL ESTATES, LANGLEY, B.C.

CONSTRUCTION AND POST CONSTRUCTION HABITAT MONITORING

Fisheries and Oceans Canada
Habitat and Enhancement Branch
100 Annacis Parkway
Delta, B.C. V3M 6A2

February 2002

ECL ENVIROWEST CONSULTANTS LIMITED
Suite 130 - 3700 North Fraser Way
Burnaby, B.C. V5J 5J4
voice: 604-451-0505
facsimile: 604-451-0557
email: admin@ecl-envirowest.bc.ca

envirowest

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GLOUCESTER INDUSTRIAL ESTATES, LANGLEY, B.C.

CONSTRUCTION AND POST CONSTRUCTION HABITAT MONITORING

Fisheries and Oceans Canada
Habitat and Enhancement Branch
100 Annacis Parkway
Delta, B.C. V3M 6A2

February 2002

ECL ENVIROWEST CONSULTANTS LIMITED
Suite 130 - 3700 North Fraser Way
Burnaby, B.C. V5J 5J4
voice: 604-451-0505
facsimile: 604-451-0557
email: admin@ecl-envirowest.bc.ca

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Report Citation: [redacted] **February 2002**. Gloucester Industrial Estates, Langley, B.C.: Construction and Post Construction Habitat Monitoring. Report prepared for Gloucester Industrial Estates, Langley, B.C. 19 pages & attachments.

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ATTACHMENT A: Gloucester Industrial Estates Figure 1
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ATTACHMENT D: Gloucester Industrial Estates 2001 Habitat Monitoring Program Watercourse A - Photographs
ATTACHMENT E: Gloucester Industrial Estates 2001 Habitat Monitoring Program Watercourses B, C, D and E - Photographs
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1.0 INTRODUCTION

The enclosed report consists of environmental monitoring and post construction monitoring of constructed habitats associated with Gloucester Industrial Estates. The report is comprised of 4 components. Sections 2.0 and 3.0 address Condition #19 of the Section 35(2) Fisheries Act Authorization No. 99-HPAC-PA2-000-000217 for habitats constructed during the years 2000 and 2001, respectively. Sections 4.0 and 5.0 address Condition #14 (a) through (e) and Condition #15 (a) through (d) of the Section 35(2) Fisheries Act Authorization Nos. 97-HPAC-PA2-0150 and 97-HPAC-PA2-023-000034, respectively, for habitats constructed in 1997.

Sections 2.0 and 3.0 comprise the environmental monitoring reports for habitats constructed in the years 2000 and 2001, respectively. Section 4.0 comprises the post construction monitoring report for habitat constructed on a tributary to West Creek, 150 metres upstream of 58 Avenue and east of 268 Street. Section 5.0 comprises the post construction monitoring report for habitats constructed in association with realignment works on Canal #3 and Canal #4, north and south of Gloucester Way. The locations of the habitats are identified in the site map (Figure 1; Attachment A). The water quality and fish sampling stations associated with the post construction monitoring programs are identified in Figure 1 (Attachment A). Photo documentation associated with the habitats detailed in each section of the report is presented in Attachments B through E. The above referenced Fisheries and Oceans Authorizations are enclosed as Attachment F.

The report brings Gloucester Industrial Estates up to date with respect to reporting obligations associated with the above referenced Fisheries Act Authorizations.

99-HPAC-PA2-000-000217

2.0 GLOUCESTER INDUSTRIAL ESTATES YEAR 2000 CONSTRUCTION WORKS, ENVIRONMENTAL MONITORING REPORT

2.1 Project Overview

The year 2000 works consisted of:

- Construction of a compensatory pond/wetland and associated re-alignment of two watercourses north of Gloucester Way within the lands designated as future golf course in the southwest quadrant of the estates;
- Construction of the east and west first flush treatment wetlands within the southeast quadrant of the estates east of the 272 Street and Gloucester Way intersection; and
- Re-alignment of the watercourse at or near site 9 within the southeast quadrant of the estates.

The location of the construction works is depicted in Figure 1 (Attachment A). The construction works were monitored to ensure that they did not negatively impact any watercourses downstream of the works.

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Mitigation measures were employed in accordance with the Authorization and the sediment and erosion control provisions of the *Land Development Guidelines for the Protection of Aquatic Habitat*[1].

2.2 Project Reference Summary

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- Project Location: Southeast and southwest quadrants of Gloucester Industrial Estates at and near the intersection of Gloucester Way and 272 Street.
- Project Description: Pond/wetland creation north of Gloucester Way and associated watercourse re-alignments; and, construction of first flush treatment wetlands associated with the re-alignment of a watercourse located at or near site 9.
- Project Engineers: Aplin and Martin Consultants Limited; and Hunter Laird Engineering Limited.
- Environmental Monitor: ECL Envirowest Consultants Limited.
- Contractor: Progressive Construction Limited.
- Design Drawings: Hunter Laird Engineering Limited:
  Job No. 4518, sheets 9 of 14 and 10 of 14, Revision 2 dated July 29, 1999; and
  ECL Envirowest Consultants Limited Drawing Nos.:
  467-02-08, Revision 01 (dated September 13, 1999);
  467-02-09, (dated April 12, 1999);
  467-02-10A, Revision 01 (dated August 9, 1999);
  467-02-10B, Revision 01 (dated August 9, 1999); and
  467-02-14 to -17 (dated May 8, 2000).
- Approval Documents: B.C. Environment, Lands and Parks Water License No. A2004880, dated September 8, 2000;
  Department of Fisheries and Oceans Authorization No. 99-HPAC-PA2-000-000217, dated August 29, 2000; and
  Extension to Approval No. A2004880, dated September 14, 2000 (Cook to

[1] **Chilibeck, B.G., G. Chislett, and G. Norris. 1993**. Land Development Guidelines for the Protection of Aquatic Habitat. Department of Fisheries and Oceans and the Ministry of Environment, Lands and Parks. Vancouver/Victoria. 108 pp.+ appendices.

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2.3 Construction and Impact Mitigation

2.3.1 Southeast Quadrant: Construction of Compensatory Pond/Wetland and Associated Re-alignment of Watercourses

Construction works commenced on August 28, 2000 with the excavation of the pond/wetland north of Gloucester Way within the lands designated as a future golf course. A pre-existing earthen coffer dam remained in place to the north separating the existing detention pond from the works (Photograph 1; Attachment B). A second earthen dam was constructed to the south of the works to divert flows from the outlet of the watercourse south of the new pond into the field to the east of the works. A fish salvage was not conducted within the wet meadow where the south watercourse originally discharged as it was deemed impractical due to the absence of a distinct channel combined with low water levels.

Construction commenced once the work area was isolated from the watercourse to the south and the existing detention pond to the north. The bottom elevation of the pond was excavated to a final grade of 85.2 meters geodetic. The wetland islands were excavated to a final elevation of 86.2 meters geodetic (including the placement of 150mm of topsoil). A wetland bench was constructed along the entire edge of the pond with the exception of two areas; the location of the discharge of the realigned south watercourse into the new pond, and a five-meter wide channel connecting the new pond to the existing detention pond. The wetland bench meandered with a width of no less than 2 meters and no more than 9 meters, with a final grade of 86.2 meters geodetic (including the placement of 150mm of topsoil). Photographs 2 and 3 (Attachment B) depict the excavated pond and topsoil placement. All material excavated from the pond footprint was used in construction of the east and west banks of the new pond or spread across the field to the west of the works. The bank slope extending landward from the wetland benches was graded to 3:1 and covered with 0.3 meters depth of topsoil to top of bank. Construction of the compensatory pond was consistent with Envirowest Drawing No. 467-02-10A Revision 01 dated August 9, 1999.

Associated with the construction of the new pond was the realignment of two watercourse outlets, one to the south of the new pond and one to the west of the existing detention pond. Construction of the realigned sections of the watercourses occurred concurrent with construction of the new pond/wetland. All works associated with the realigned sections were performed in the dry and in isolation of the existing watercourses. Isolation was achieved with earthen coffer dams. The construction of the realigned sections of both watercourses was consistent with the typical channel sections depicted in Envirowest Drawing No. 467-02-08 Revision 01 dated September 13, 1999 and the aforementioned approval documents.

Flows were introduced to the realigned sections of watercourse and new pond/wetland on September 29, 2000. Heavy rains the night of September 28, 2000 helped facilitate the filling of the new pond with water prior to introduction of flows; water within the existing detention pond also breached the earthen dam separating the detention pond from the pond/wetland at a few low points. A channel was excavated connecting the existing detention pond to the new pond and the

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earthen dam was graded to wetland bench elevation. As the water levels in the new pond/wetland and the existing detention pond were approximately the same, removal of the dam resulted in minimal release of sediment-laden water into the pond/wetland. Any sediment-laden water entering the new pond from the excavation of the channel and the removal of the earthen dam settled out prior to flows exiting the pond. Once the connection to the existing detention pond was complete the earthen dam to the south of the new pond was graded to wetland bench elevation and a channel was excavated for the outlet of the newly realigned section of watercourse to the south.

Introduction of flows to the newly constructed sections of watercourse south of the new pond and west of the existing detention pond commenced following the connection of the two large ponds. The earthen dams upstream of the new sections of watercourses were removed. The sections of existing watercourses subject to re-alignment were isolated with earthen coffer dams. A fish and amphibian salvage was conducted within the isolated sections of existing watercourse that were to be abandoned. A complete summary of all fish captured during the salvages associated with the re-alignment of the watercourses south of the new pond and west of the existing detention pond is provided in Table 2.1. Once all fish were salvaged the old channel sections were pumped dry and backfilled.

Table 2.1 Fish Salvage Summary – Watercourse Sections Subject to Realignment

Date	Location	Fish Species	Number	Forklength Range
September 29, 2000	Watercourse South of New Pond/Wetland	TSB	31	
September 29, 2000	Watercourse West of Existing Detention Pond	ACT TSB	1 54	260 mm

ACT Anadromous Cutthroat Trout (*Oncorhynchus clarki*)
TSB Threespine Stickleback (*Gasterosteus aculeatus*)

Compensatory planting for the new pond and re-aligned watercourses commenced on approximately September 25, 2000. Vegetation on the islands within the new pond/wetland was planted prior to the introduction of flows and in compliance with condition #31 of the DFO Authorization stating a minimum density criterion of four (4) plants per square meter (Photograph 4; Attachment B). Hydroseeding of all disturbed soils was complete on October 13, 2000. The compensatory planting associated with the new pond/wetland and realigned watercourses within the southwest quadrant of the estates is consistent with Envirowest Drawing Nos. 467-02-10A Revision 01 dated August 9, 1999 and 467-02-10B Revision 01 dated August 9, 1999. All compensatory plantings were complete by October 20, 2000. Photographs 5 and 6 (Attachment B) depict the completed pond and reconstructed inlet and outlet channels.

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2.3.2 *Southwest Quadrant: Construction of First Flush Treatment Wetlands for Stormwater Management and Re-alignment of Watercourse*

Construction of the western first flush treatment wetland (west wetland) for stormwater management east of 272 Street commenced on September 11, 2000. A small watercourse (unnamed west watercourse) traversing the work area was diverted around the construction site using a diversion ditch complete with drain rock check dams. A fish and amphibian salvage was conducted prior to diverting flows through the diversion ditch (Photograph 7; Attachment B). A complete summary of the fish captured during the salvage is provided in Table 2.2. Once the diverted section of watercourse was dewatered construction of the west wetland commenced with all works occurring in the dry. Photograph 8 (Attachment B) depicts construction of the west wetland. The west wetland was constructed consistent with Envirowest Drawing Nos. 467-02-14 and –15, dated May 8, 2000. Topsoil was placed to a depth of 150mm on the bottom of the wetland and to a depth of 300mm on the banks of the wetland. Wetland planting was undertaken prior to the introduction of flows and in compliance with condition #31 of the DFO Authorization stating a minimum density criterion of four (4) plants per square meter (Photograph 9; Attachment B). Riparian vegetation planted in association with the west wetland is consistent with Envirowest Drawing No. 467-02-16, dated May 8, 2000; salvaged plant material was utilized in combination with nursery stock.

Table 2.2 Fish Salvage Results – Unnamed West Watercourse

Date	Location	Fish Species	Number
September 11, 2000	Unnamed West Watercourse	TSB	17

A temporary ditch and headwall were installed in conjunction with the west wetland. Construction works immediately east of the 272 Street and Gloucester Way intersection commenced on September 14, 2000. Four (4) storm sewer culverts and a sandbag headwall were placed immediately south of the existing headwall on the east side of the intersection. No instream works were required for the placement of the culverts and headwall. Construction of the temporary ditch commenced on September 25, 2000. The ditch works were isolated from the unnamed west watercourse and the diversion channel using earthen coffer dams. The temporary ditch was constructed in the dry commencing at the intersection of 272 Street and Gloucester Way and terminating at the culverts conveying flows into the west wetland (Photograph 10; Attachment B). Once the temporary ditch works were complete the earthen coffer dams were removed and flows were introduced to the ditch.

Flows were introduced to the west wetland on September 29, 2000. A fish and amphibian salvage was conducted within the diversion channel; fish were not recovered. The diversion channel was then isolated from flows, dewatered, and backfilled.

Construction of the eastern first flush treatment wetland (east wetland) and the realignment of the watercourse (unnamed east watercourse) commenced on September 18, 2000 with clearing and grubbing of vegetation within the work area. Works commenced at the southern end of the work

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area and terminated at the northern end. Photograph 11 (Attachment B) depicts channel construction associated with realignment of the unnamed east watercourse. Construction of the east wetland and the re-alignment for the unnamed east watercourse were performed in the dry. Construction of the east wetland was consistent with Envirowest Drawing Nos. 467-02-14 and -15, both dated May 8, 2000. Construction of the re-aligned channel within site 9 was consistent with Envirowest Drawing No. 467-02-09 dated April 12, 1999 and Hunter Laird Engineering Ltd. Job No. 4518, sheets 9 of 14 and 10 of 14, both Revision A and dated July 29, 1999, except that riprap was not placed on poolside slopes and 300 minus round rock was not placed on channel side slopes (Photograph 12; Attachment B). In addition to the aforementioned drawings, the works were completed in compliance with the authorization documents listed in the Reference Summary. Topsoil was placed to a depth of 150mm on the bottom of the wetland and to a depth of 300mm on the banks of the wetland and re-aligned channel. Flows were introduced to the re-aligned channel and east wetland on September 29, 2000. A fish salvage was not conducted within the section of watercourse being realigned as it was not being dewatered, would be subject to inputs of water resulting from overland flow within nearby undeveloped sites, and was still connected at the downstream end to existing drainages.

Wetland planting within the east wetland was undertaken following the introduction of flows and in compliance with condition #31 of the DFO Authorization stating a minimum density criterion of four (4) plants per square meter. During planting of wetland vegetation, silt fence toed into a drain rock dam was utilized to preclude any sediment-laden water produced during planting works from entering the unnamed east watercourse. Compensatory riparian vegetation planted in association with the east wetland and the re-alignment of the unnamed east watercourse was performed using salvaged plant material in combination with nursery stock (Photographs 13 and 14; Attachment B). Compensatory riparian planting associated with the east wetland and re-aligned watercourse currently does not meet the requirements outlined within the authorization documents and Envirowest Drawing Nos. 467-02-09 dated April 12, 1999, and 467-02-16 and -17, both dated May 8, 2000. Riparian planting does not meet the aforementioned requirements because planting works were suspended due to negative impacts such as sloughing of the channel and wetland banks during planting. Planting works were not completed, as the negative impacts to the channel and wetland banks associated with the potential for decreased water quality were deemed greater than the positive impacts associated with planting so late in the growing season. Envirowest will assess the riparian habitat and issue recommendations in the planting season of 2002 to complete the riparian planting associated with the east wetland and associated channel. Hydroseeding of all disturbed soils and newly placed topsoil was complete on October 13, 2000.

2.4 Discussion

The Year 2000 construction works within Gloucester Industrial Estates involved the construction of a compensatory pond/wetland and the associated realignment of two watercourses north of Gloucester Way within the lands designated as a future golf course. The compensatory planting associated with the compensatory pond/wetland and realigned watercourses was completed in compliance with the DFO Authorization.

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The year 2000 works also included construction of the east and west first flush treatment wetlands and realignment of the unnamed east watercourse near site 9 within the southeast quadrant of the estates. Compensatory riparian planting associated with the east wetland and re-aligned watercourse currently does not meet the requirements outlined within the authorization documents as planting was suspended and will be conducted at the start of the growing season within the 2002 calendar year. The 5 year post construction monitoring program of the habitats constructed in the year 2000 will commence in 2002.

All construction activities associated with the above described project were completed without significant impacts to fish or wildlife habitat and in accordance with the requirements of the *Land Development Guidelines for the Protection of Aquatic Habitat*, the authorization documents listed in the Reference Summary and at the direction of the environmental monitor.

3.0 GLOUCESTER INDUSTRIAL ESTATES YEAR 2001 CONSTRUCTION WORKS, ENVIRONMENTAL MONITORING REPORT

3.1 Project Overview

The year 2001 works consisted of:

- Enhancement of an existing watercourse, including partial realignment associated with wetland and pond creation at compensatory site A, located near site 1;
- Enclosure of a temporary drainage ditch and associated completion of construction of the storm sewer from 272 Street eastward along the extension of Gloucester Way to the headwall at the first flush treatment wetland (west wetland); and
- Removal of blockages along the channel downstream of the west wetland.

The location of the construction works is depicted in Figure 1 (Attachment A). The construction works were monitored to ensure that they did not negatively impact any watercourses downstream of the works. Mitigation measures were employed in accordance with the Authorization, the sediment and erosion control provisions of the *Land Development Guidelines for the Protection of Aquatic Habitat* and at the direction of the environmental monitor.

3.2 Project Reference Summary

- Project Location: Northeast and southeast quadrants of Gloucester Industrial Estates at 60 Avenue near site 1 and at the intersection of Gloucester Way and 272 Street, respectively.

- Project Description: Enhancement of existing watercourse including channel

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realignment and pond creation near site 1, enclosure of temporary ditch at the intersection of Gloucester Way and 272 Street and removal of blockages downstream of the west wetland.

- Project Engineers: Aplin and Martin Consultants Limited; and Hunter Laird Engineering Limited.
- Environmental Monitor: ECL Envirowest Consultants Limited
- Contractor: Progressive Construction Limited; and B&B Contracting Limited
- Design Drawings: Hunter Laird Engineering Limited: Job No. 4518, sheet 10 of 14, Revision 2 dated March, 1999; and ECL Envirowest Consultants Limited: Drawing No. 467-06-01R, dated March, 1999.
- Approval Documents: B.C. Environment, Lands and Parks Water License No. A2004880, dated September 8, 2000; and Department of Fisheries and Oceans Authorization No. 99-HPAC-PA2-000-000217, dated August 29, 2000.

3.3 Construction and Impact Mitigation

3.3.1 Enhancement of an Existing Watercourse – Northeast Quadrant

Construction works commenced on July 4, 2001 with clearing and grubbing of the footprint of the two ponds and wetland areas within the channel enhancement corridor. The existing channel was dry during the entire duration of the works, isolation and dewatering of the existing channel was therefore not required. A fish and amphibian salvage was not conducted. The enhancement corridor was accessed from the east utilizing an existing access road.

Excavation of the new alignment started at the southern extent of the enhancement corridor immediately downstream of the existing wetland. Channel construction was performed in such a manner as to prevent impacts to vegetation outside of the constructed channel and pond footprint. Machinery worked from above the centerline of the proposed channel alignment back out towards the enhancement corridor access area (Photograph 1; Attachment C). The existing channel was retained and left undisturbed in two locations within the enhancement corridor.

The new channel was constructed with 0.3 metres depth of coho gravels deposited along the channel bottom (Photograph 2; Attachment C) and cedar rootwads installed within the ponds (Photograph 3; Attachment C). Approximately 32 linear metres of channel was constructed north of the existing wetland in a north/south alignment connecting to the newly constructed south

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pond. The south pond was constructed with 10 cedar rootwads installed along the perimeter of the pond and approximately 80 square metres of wetland bench primarily located along the south edge of the pond (Photograph 4; Attachment C). The south pond outlet was constructed to discharge into an existing portion of channel approximately 20 linear metres in length. Approximately 34 linear metres of channel was constructed in a north/south alignment downstream of the retained portion of existing channel, connecting to the north pond. The north pond was constructed with 6 cedar rootwads installed around the perimeter of the pond and approximately 100 square metres of wetland bench located along the south edge of the pond. Approximately 42 metres of channel was constructed north of the north pond in an east/west alignment; the channel then turned north and connected to an existing portion of channel before crossing under 60 Avenue. With the exception of topsoil, excavated material was hauled off site. Excavated topsoil was deposited on the channel banks and wetland benches as growing medium for the riparian and wetland planting. Construction of the channel and ponds was consistent with Envirowest Drawing No. 467-06-01R, dated March 1999.

The newly constructed channel banks, existing woodland, and a disturbed area between the north and south ponds immediately adjacent the eastern perimeter of the enhancement corridor were landscaped with native shrub and tree species. Wetland planting and live staking was not conducted but is scheduled to be undertaken early in the spring planting season of 2002. Table 3.1 details the landscape works performed within the enhancement corridor in 2001 and Table 3.2 details the landscape works scheduled to be undertaken in the spring planting season of 2002.

Enhancement of the existing watercourse, including partial realignment and construction of two ponds and associated wetlands was completed on July 12, 2001. Landscaping of the pool and wetland banks, disturbed upland area between the ponds, and the existing woodland was completed on October 23, 2001. With the exception of the wetland planting and live staking, the enhancement works were consistent with Envirowest drawing 467-06-01R and the authorization documents listed in the Project Reference Summary (Section 3.1). Photographs 5 and 6 (Attachment C) depict the landscaped north and south ponds within the enhancement corridor.

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Table 3.1 Completed Landscape Works – 60 Avenue Enhancement Area

Habitat	Plant Species	Plant Quantity	Plant Specifications
South Pond/Wetland Banks	thimbleberry (*Rubus parviflorus*)	35	No. 2 pot
	salmonberry (*Rubus spectabilis*)	35	No. 2 pot
	Nootka rose (*Rosa nutkana*)	35	No. 2 pot
	black twinberry (*Lonicera involucrata*)	35	No. 2 pot
	Sitka willow (*Salix sitchensis*)	35	No. 2 pot
	Pacific willow (*Salix lucida* spp. *lasiandra*)	30	No. 2 pot
	red-osier dogwood (*Cornus stolonifera*)	35	No. 2 pot
North Pond/Wetland Banks	thimbleberry (*Rubus parviflorus*)	30	No. 2 pot
	salmonberry (*Rubus spectabilis*)	30	No. 2 pot
	Nootka rose (*Rosa nutkana*)	30	No. 2 pot
	black twinberry (*Lonicera involucrata*)	30	No. 2 pot
	Sitka willow (*Salix sitchensis*)	30	No. 2 pot
	red-osier dogwood (*Cornus stolonifera*)	30	No. 2 pot
	Pacific willow (*Salix lucida* spp. *lasiandra*)	30	No. 2 pot
Disturbed Upland Area Between Ponds	thimbleberry (*Rubus parviflorus*)	42	No. 2 pot
	salmonberry (*Rubus spectabilis*)	42	No. 2 pot
	Nootka rose (*Rosa nutkana*)	41	No. 2 pot
	western redcedar (*Thuja plicata*)	4	1.5 m B&B
	red alder (*Alnus rubra*)	18	3 m B&B
	Indian-plum (*Oemleria cerasiformis*)	41	No. 2 pot
Existing Woodland	western redcedar (*Thuja plicata*)	25	1.5 m B&B

Table 3.2 Landscape Works to be Undertaken in Spring 2002 – 60 Avenue Enhancement Area

Habitat	Plant Species	Plant Quantity	Plant Specifications
Creek Channel Banks	red-osier dogwood (*Cornus stolonifera*)	269	Live stakes
	Scouler's willow (*Salix scouleriana*)	269	Live stakes
	Sitka willow (*Salix sitchensis*)	269	Live stakes
	Pacific willow (*Salix lucida* spp. *lasiandra*)	269	Live stakes
South Wetland	broad-leaved cattail (*Typha latifolia*)	320	Tubers
North Wetland	broad-leaved cattail (*Typha latifolia*)	100	Tubers

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3.3.2 Enclosure of a Temporary Drainage Ditch at 272 Street and Gloucester Way – Southeast Quadrant

The enclosure of a temporary drainage ditch was required to complete construction of a storm sewer extending from two storm outfalls located on the east shoulder of 272 Street to the headwall of the west biofiltration wetland within the future alignment of Gloucester Way. Photograph 7 (Attachment C) depicts the temporary ditch prior to enclosure. Ditch enclosure and associated storm sewer construction works commenced on July 24, 2001. The ditch was isolated with sandbag dams wrapped in polyethylene sheeting (Photograph 8; Attachment C). A fish and amphibian salvage was conducted using a pole seine and a Coffelt BP-4 backpack electroshocker. A summary of all fish captured during the salvage is provided in Table 3.3 below. The ditch was dewatered prior to works; the pump discharge was wrapped in filter fabric to dissipate energy and conveyed flows into the west wetland. Water was not discharging from the existing storm outfall during works, therefore flows were not conveyed around the isolated work area.

Table 3.3 Fish Salvage Results – Temporary Ditch

Date	Location	Fish Species	Number
July 24, 2001	Temporary Ditch	TSB	143

Installation of the storm sewer commenced with excavation of the storm sewer footprint and backfilling of the temporary ditch. The existing headwall located at the shoulder of 272 Street was removed. A pre-cast custom manhole was deposited adjacent to 272 Street. The storm sewer pipe was attached to the custom manhole utilizing quick dry grout; grouting works were performed in the dry (Photograph 9; Attachment C). The storm sewer was installed and connected to the existing west wetland headwall. The enclosure of the temporary ditch did not impact the west wetland or downstream watercourses. Construction of the storm sewer was consistent with Hunter Laird Engineering Limited drawing No. 4518, sheet 10 of 14, Revision 2 dated March, 1999.

3.3.3 Removal of Blockages Downstream of West Biofiltration Wetland – Southeast Quadrant

The removal of blockages within the channel downstream of the west wetland (first channel to the east of 272 Street running parallel with and to the north side of Gloucester Way) was required to reduce water levels within the west wetland constructed during the 2000 fisheries work window. Colonization of the planted cattails within the wetland was suppressed due to the high water levels.

The remedial channel clearing works commenced and were completed on August 28, 2001. The work area was isolated with an earthen coffer dam at the upstream limit of works. The channel was grown in with grasses at the downstream limit of works; a dam was not installed here to allow the grasses to filter seepage water during works and also to maximize drainage of the channel prior to works. Flows were not conveyed around the work area as the downstream limit of works was immediately upstream of the confluence with the ditch and the unnamed east watercourse near site 9 which maintained flows downstream of the work area. A fish and

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amphibian salvage was conducted using a pole seine and a Coffelt BP-4 backpack electroshocker. Fish were not captured.

Channel clearing works were performed from the south top-of-bank with a soft tire backhoe and in a manner that prevented impacts to vegetation. Access to the site and channel clearing works impacted grasses only; riparian shrubs and trees were not disturbed. Material excavated from the channel was side cast and spread flat in grassland areas. Photographs 10 and 11 (Attachment C) depict the top-of-bank prior to and post works, respectively. The upstream earthen dam was removed with incremental controlled breaches to avoid a large flush of water downstream. All excavated material was hand seeded with fall rye. The channel clearing works did not result in impacts to downstream watercourses or riparian vegetation. Photograph 12 (Attachment C) depicts the completed channel works.

3.4 Discussion

The Year 2001 construction works within Gloucester Industrial Estates involved the enhancement of an existing watercourse in the northeast quadrant of the estates near site 1, the enclosure of a temporary ditch in the southeast quadrant of the estates near the intersection of 272 Street and Gloucester Way to facilitate completion of storm sewer works, and the removal of blockages from the channel downstream of the west biofiltration wetland to reduce water levels within the west wetland. Riparian shrub and tree planting associated with the watercourse enhancement works were completed as per the authorization documents outlined in the Project Reference Summary; wetland planting and live staking are scheduled to be completed in the spring planting season of 2002. did this occur?

Post construction monitoring of the channel enhancement works will commence in 2002. All construction activities associated with the above described project were completed without impacts to fish or wildlife habitat and in accordance with the requirements of the *Land Development Guidelines for the Protection of Aquatic Habitat*, the authorization documents listed in the Reference Summary and at the direction of the environmental monitor.

97-HPAC-PR2-015c

4.0 2001 HABITAT MONITORING PROGRAM – WATERCOURSE A

The following details the post construction monitoring of compensatory habitat (Watercourse A) constructed in association with the approved enclosure of 50 square metres of channel and alienation of 1000 square metres of riparian vegetation at the headwaters of a tributary to West Creek within Gloucester Industrial Estates. This section of the report addresses Condition No. 14 (a) through (e) of the Section 35(2) Fisheries Act Authorization provided for the project and summarizes information collected during the fourth year since the habitat was constructed. The 2001 monitoring year is the first year of post construction monitoring to be conducted for the referenced habitat and is considered year 4 of the 5-year monitoring program. A final post construction monitoring report will be submitted at the beginning of 2003 and will include the final year of post construction monitoring conducted during 2002. *

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4.1 Introduction

As per requirements outlined in the Authorization, the monitoring program included an assessment of channel stability, riparian vegetation, water quality (*i.e.* dissolved oxygen and temperature), channel flow velocity and fish utilization. Water quality measurements, fish sampling, an assessment of physical stability, riparian vegetation and flow velocity measurements were conducted on June 26, 2001. The locations of the water quality and fish sampling stations are identified in Figure 1 (Attachment A). Assessment methodology and results are presented in Sections 4.2 and 4.3, respectively.

4.2 Methodology

4.2.1 Channel Stability

The physical stability of the constructed channel was visually assessed.

4.2.2 Riparian Vegetation

Riparian shrub and tree mortalities were visually assessed during the site visit. Species and numbers of riparian shrub and tree mortalities were noted.

4.2.3 Water Quality

In situ water quality analysis was conducted using a YSI 55 (dissolved oxygen) meter. The YSI 55 meter was calibrated in accordance with the manufacturer's recommended methods prior to sampling. Water quality measurements were obtained from 2 sampling stations, WQ-A01 and WQ-A02; the locations of these sampling stations are identified in Figure 1 (Attachment A).

4.2.4 Channel Flow Velocity

Measurement of stream velocity within the channel was conducted using a No. 622 Current Meter. The No. 622 Current Meter is factory calibrated and does not require calibration prior to use. The measurement of channel flow velocity was conducted approximately 20 metres downstream of the outfall conveying flows beneath lot 2. The meter was positioned in the centerline of the channel at a depth of approximately 60 percent of the total depth of water.

4.2.5 Fish Sampling

Fish sampling was conducted using gee-type minnow traps baited with salmon roe. Two (2) traps were set and soaked for approximately 24 hours to assess utilization of the constructed channel. The locations of the fish sampling stations (FSS-A01 and FSS-A02) are identified in Figure 1 (Attachment A).

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4.3 Results and Discussion

The following summaries present results of the data collected during the 2001 monitoring period. Photo documentation of the constructed habitat is provided in Attachment D.

4.3.1 Physical Stability

The constructed channel showed no evidence of erosion, slumping, tension cracks or debris accumulation during the survey.

4.3.2 Riparian Vegetation

Riparian vegetation survivorship of shrubs exceeds 80 percent and tree mortalities were not noted. The banks are overgrown with red alder (*Alnus rubra*), reed canary grass (*Phalaris arundinacea*), evergreen blackberry (*Rubus laciniatus*) and Himalayan blackberry (*Rubus discolor*). Instream vegetation consisted of cattail (*Typha latifolia*) and common rush (*Juncus effuses*).

4.3.3 Water Quality

Results from the water quality assessments at stations WQ-A01 and WQ-A02 are summarized in Table 4.1 below. Dissolved oxygen concentrations ranged from a minimum of 2.94 mg/L to a maximum of 4.64 mg/L. Temperature ranged from a minimum of 14.5°C to a maximum of 15.0°C.

Table 4.1 Water Quality Sampling Results – Watercourse A

Sample Site	Date of Sampling	Water Temperature°C	Dissolved Oxygen (mg/L)
WQ-A01	June 26, 2001	14.5	2.94
WQ-A02	June 26, 2001	15.0	4.64

4.3.4 Channel Flow Velocity

Channel flow velocity within the constructed channel during the assessment was less than 0.024 m/s.

4.3.5 Fish Sampling

On June 26, 2001 threespine stickleback (*Gasterosteus aculeatus*) were captured within the constructed habitat. The results of fish sampling are presented in Table 4.2 below.

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Table 4.2 Fish Sampling Results – Watercourse A

Sample Site	Date of Sampling	Species Captured	Number of Fish Captured
FSS-A01	June 26, 2001	TSB	6
FSS-A02	June 26, 2001	TSB	1

4.4 Summary of Post Construction Monitoring

Results obtained during year 4 of the post-construction monitoring program indicate that:

- The channel is stable and functioning as intended;
- Shrub survivorship exceeds 80 percent and tree survivorship is 100 percent;
- Dissolved oxygen concentrations ranged between 2.94 and 4.64 mg/L and water temperature ranged between 14.5°C and 15.0°C;
- Threespine stickleback were captured within the channel; and
- Channel flow velocities were less than 0.024 m/s

The final year of post construction monitoring of channel A will be conducted in 2002 with a final post construction monitoring report submitted at the beginning of 2003.

97-HPAC-PA2-023-000034

5.0 2001 HABITAT MONITORING PROGRAM – WATERCOURSES B, C, D, & E

The following details the post construction monitoring of habitats (Watercourses B through E) constructed in association with the approved harmful alteration of fish habitat on Canal #3 and Canal #4 north and south of Gloucester Way within Gloucester Industrial Estates. This section of the report addresses Condition No. 15 (a) through (d) of the Section 35(2) Fisheries Act Authorization provided for the project and summarizes information collected during the 2001 monitoring year (i.e. the fourth year since the habitats were constructed). The 2001 monitoring year is the first year of post construction monitoring for the referenced habitats and is considered year 2 of the 3-year monitoring program. A final post construction monitoring report will be submitted at the beginning of 2003 and will include the final year of post construction monitoring conducted during 2002.

5.1 Introduction

As per requirements outlined in the Authorization, the monitoring program included an assessment of channel stability, riparian vegetation and fish utilization. Fish sampling and an assessment of physical stability and riparian vegetation were conducted on June 26, 2001 and July

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10, 2001. The locations of the fish sampling stations are identified in Figure 1 (Attachment A). Assessment methodology and results are presented in Sections 5.2 and 5.3, respectively.

5.2 Methodology

5.2.1 Channel Stability

The physical stability of the realigned/constructed channels was visually assessed.

5.2.2 Riparian Vegetation

Riparian shrub and tree mortalities were visually assessed during the site visit. Species and numbers of riparian shrub and tree mortalities were noted.

5.2.3 Fish Sampling

Fish sampling was conducted using gee-type minnow traps baited with salmon roe. Traps were set and soaked for approximately 24 hours to assess utilization of the constructed channels. The locations of the fish sampling stations (FSS-B01, FSS-B02, FSS-B03, FSS-E01 and FSS-E02) are identified in Figure 1 (Attachment A).

5.3 Results and Discussion

The following summaries present results of the data collected during the 2001 monitoring period. Photo documentation of the constructed habitats is provided in Attachment E.

5.3.1 Watercourse B

5.3.1.1 Physical Stability

The constructed channel showed no evidence of erosion, slumping, tension cracks or debris accumulation during the survey.

5.3.1.2 Riparian Vegetation

Riparian vegetation survivorship of shrubs exceeds 80 percent and tree mortalities were not noted. The banks are overgrown with red alder. The channel bottom has been colonized by cattail and common rush.

5.3.1.3 Fish Sampling

On June 26, 2001 threespine stickleback were captured within the constructed channel. The results of fish sampling are presented in Table 4.3 below.

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Table 4.2 Fish Sampling Results – Watercourse B

Sample Site	Date of Sampling	Species Captured	Number of Fish Captured
FSS-B01	June 26, 2001	TSB	2
FSS-B02	June 26, 2001	TSB	37
FSS-B03	June 26, 2001	TSB	58

5.3.2 Watercourse C

5.3.2.1 Physical Stability

The constructed wetland showed no evidence of erosion, slumping, tension cracks or debris accumulation during the survey.

5.3.2.2 Riparian Vegetation

Riparian vegetation survivorship of shrubs exceeds 80 percent and tree mortalities were not noted. The banks are overgrown with red alder. Cattail is established along the wetland bottom.

5.3.2.3 Fish Sampling

Water levels within the wetland were not of sufficient depth to set minnow traps. Fish sampling will be conducted during the winter/spring season of 2002 when water levels are expected to be higher.

5.3.3 Watercourse D

5.3.3.1 Physical Stability

The constructed channel showed no evidence of erosion, slumping, tension cracks or debris accumulation during the survey.

5.3.3.2 Riparian Vegetation

Riparian vegetation survivorship of shrubs exceeds 80 percent and tree mortalities were not noted. The banks are overgrown with red alder. The channel bottom has been colonized by Cattail.

5.3.3.3 Fish Sampling

Water levels within the channel were not of sufficient depth to set minnow traps. Fish sampling will be conducted during the winter/spring season of 2002 when water levels are expected to be higher.

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5.3.4 Watercourse E

5.3.4.1 Physical Stability

The constructed channel showed no evidence of erosion, slumping, tension cracks or debris accumulation during the survey.

5.3.4.2 Riparian Vegetation

Riparian vegetation survivorship of shrubs exceeds 80 percent and tree mortalities were not noted. The banks are overgrown with red alder. The channel bottom has been colonized by cattail and common rush.

5.3.4.3 Fish Sampling

On July 10, 2001 threespine stickleback were captured within the constructed channel. The results of fish sampling are presented in Table 4.4 below.

Table 4.4 Fish Sampling Results – Watercourse E

Sample Site	Date of Sampling	Species Captured	Number of Fish Captured
FSS-E01	July 10, 2001	TSB	40
FSS-E02	July 10, 2001	TSB	60

5.4 Summary of Post Construction Monitoring

Results obtained during year 2 of the post-construction monitoring program indicate that:

- The constructed channels and wetland are stable and functioning as intended;
- Shrub survivorship exceeds 80 percent and tree survivorship is 100 percent for all habitats; and
- Threespine stickleback were captured within channels B and E; channels C and D did not have sufficient water depth to set traps.

The final year of post construction monitoring of channels B through E will be conducted in 2002 with a final post construction monitoring report submitted at the beginning of 2003.

6.0 CONCLUSIONS

This report details environmental monitoring and post construction monitoring of constructed habitats associated with Gloucester Industrial Estates. The report addresses Condition #19 of the

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Section 35(2) Fisheries Act Authorization No. 99-HPAC-PA2-000-000217 for habitats constructed in the years 2000 and 2001, and Condition #14 (a) through (e) and Condition #15 (a) through (d) of the Section 35(2) Fisheries Act Authorization Nos. 97-HPAC-PA2-0150 and 97-HPAC-PA2-023-000034, respectively, for the habitats constructed in 1997. The report consists of the 4 components listed below:

1. Environmental monitoring report for habitats constructed in 2000;
2. Environmental monitoring report for habitats constructed in 2001;
3. Post construction monitoring report (year 4) for habitat constructed on a tributary to West Creek, 150 metres upstream of 58 Avenue and east of 268 Street; and
4. Post construction monitoring report (year 2) for habitats constructed in association with realignment works on Canal #3 and Canal #4 north and south of Gloucester Way.

The report brings Gloucester Industrial Estates up to date with respect to reporting obligations associated with the above referenced Fisheries Act Authorizations. Post construction monitoring for habitats constructed in the years 2000 and 2001 will commence in 2002. Final post construction monitoring of habitats constructed in 1997 (channels A through E) will be conducted in 2002 and final reports will be submitted at the beginning of 2003.

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ATTACHMENT A
GLOUCESTER INDUSTRIAL ESTATES
FIGURE 1

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WATERCOURSE A

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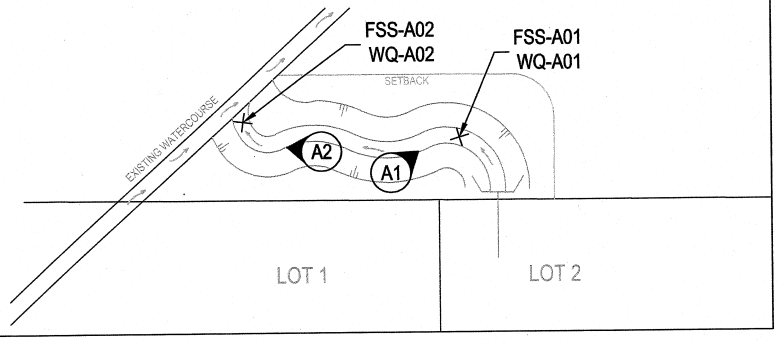

WATERCOURSE E

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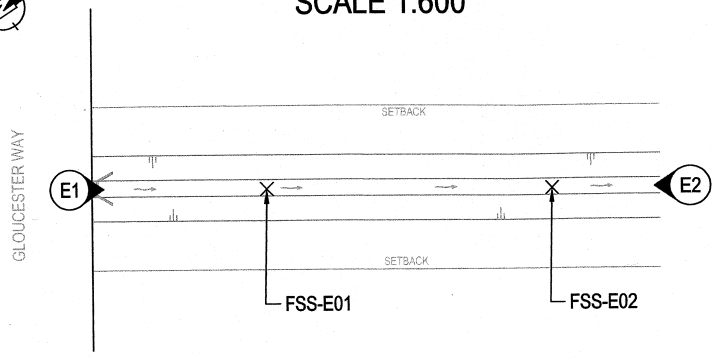

WATERCOURSE B

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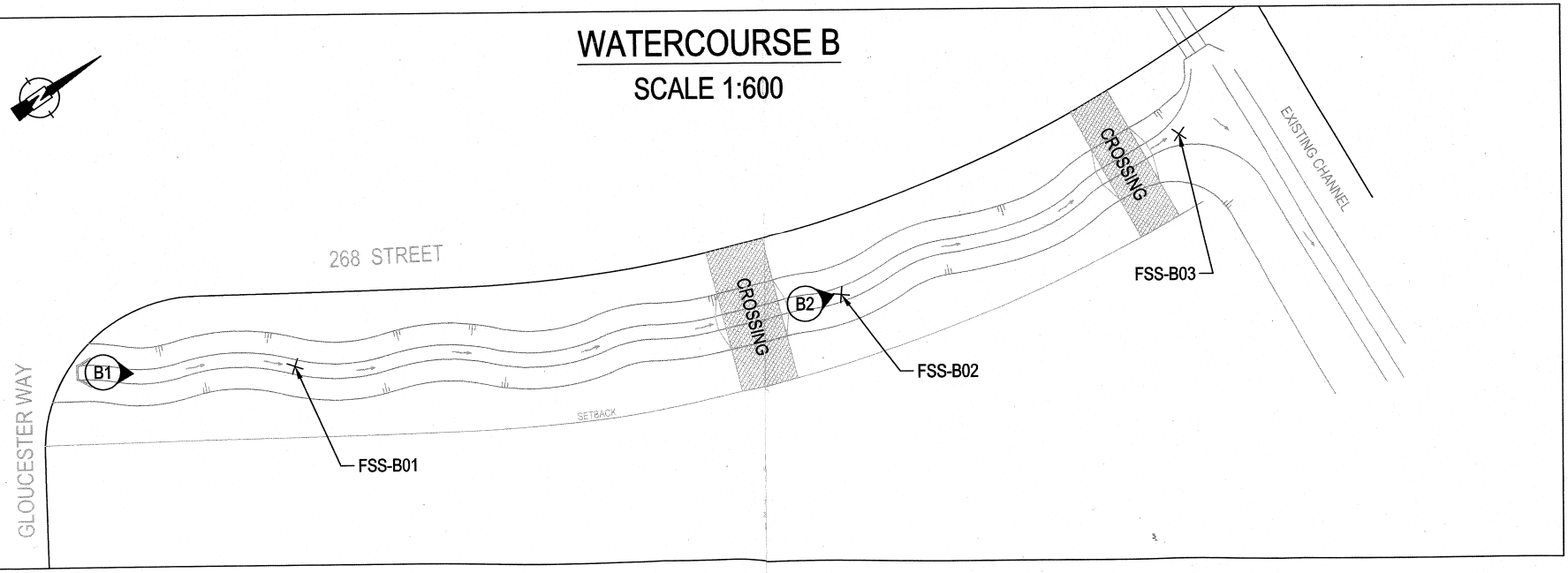

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SITE MAP

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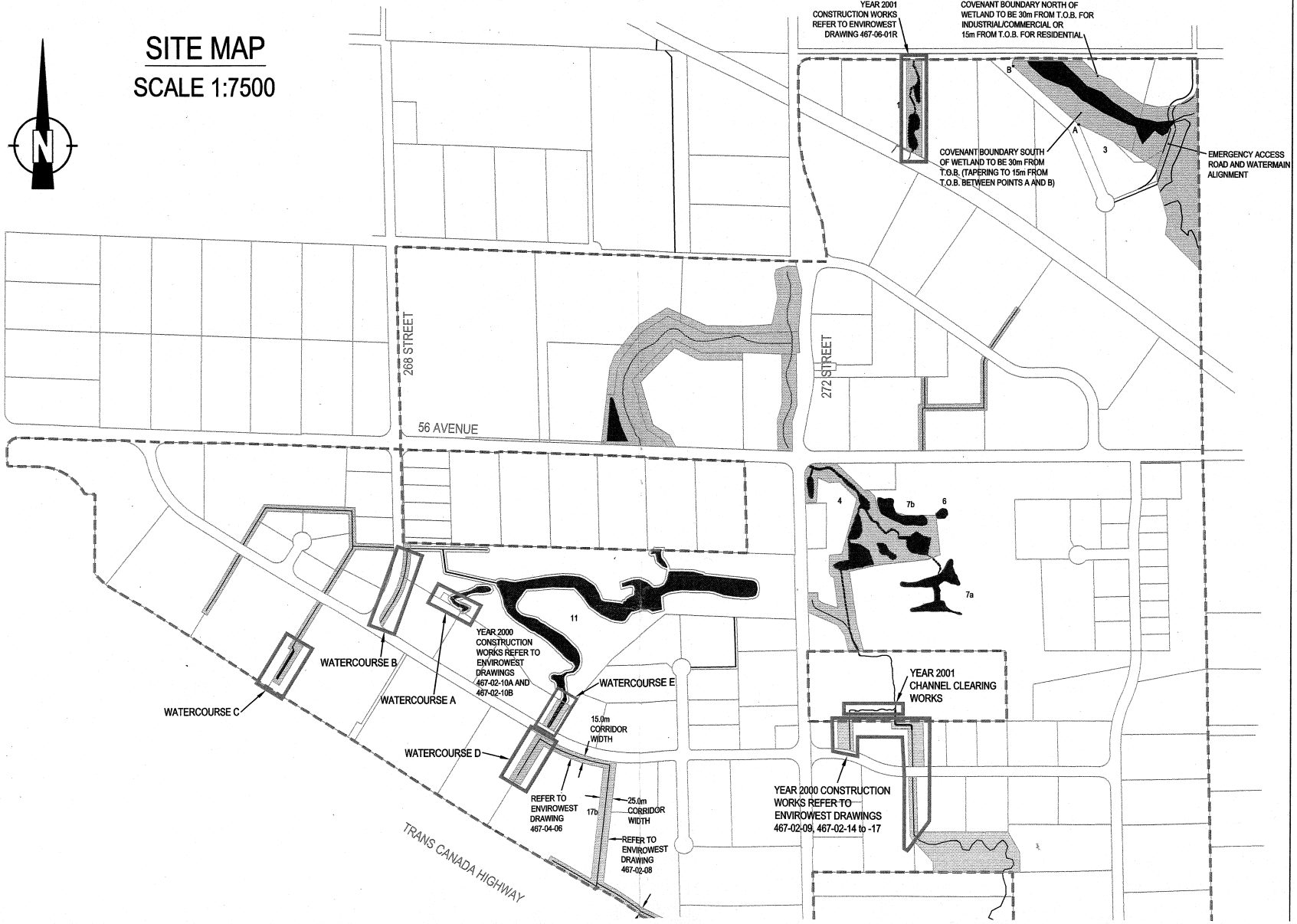

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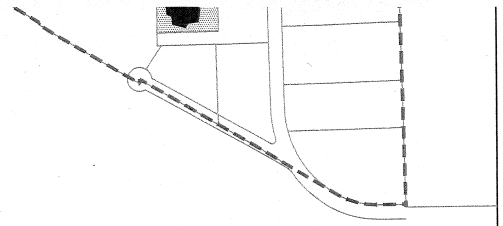

LEGEND

WQ	Water Quality Station
FSS	Fish Sampling Station
A1 ▶	Photograph (Direction Indicated by Arrow)

GLOUCESTER INDUSTRIAL ESTATES
Langley, B.C.

CONSTRUCTION AND POST CONSTRUCTI
HABITAT MONITORING

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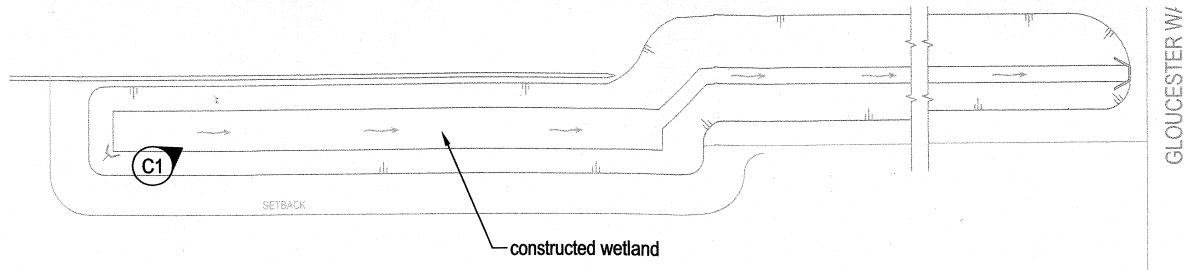

WATERCOURSE D

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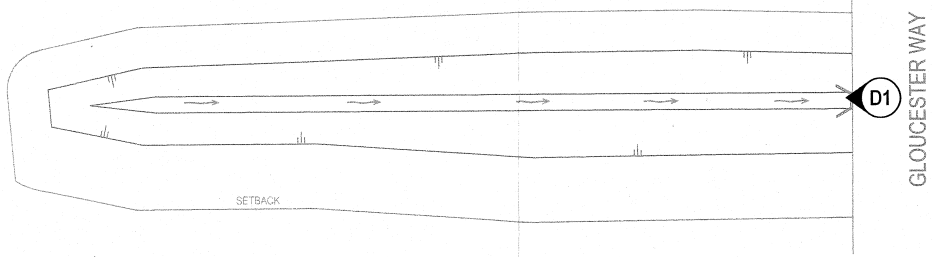

TES

UCTION

envirowest

ENVIRONMENTAL CONSULTANTS

ECL ENVIROWEST CONSULTANTS LIMITED
Suite 130 – 3700 North Fraser Way, Burnaby, B.C. Canada V5J 5J4
phone: (604) 451-0505 fax: (604) 451-0557

SITE MAP AND MONITORING STATIONS

DESIGN:	DRAWN:	CHECKED:	REVISION:	REVISION DATE:
EDB	NMG	RWS		
SCALE: As Shown			DRAWING NUMBER: Figure 1	
DATE: February 2002				

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ATTACHMENT B
GLOUCESTER INDUSTRIAL ESTATES
YEAR 2000 CONSTRUCTION WORKS
PHOTOGRAPHS

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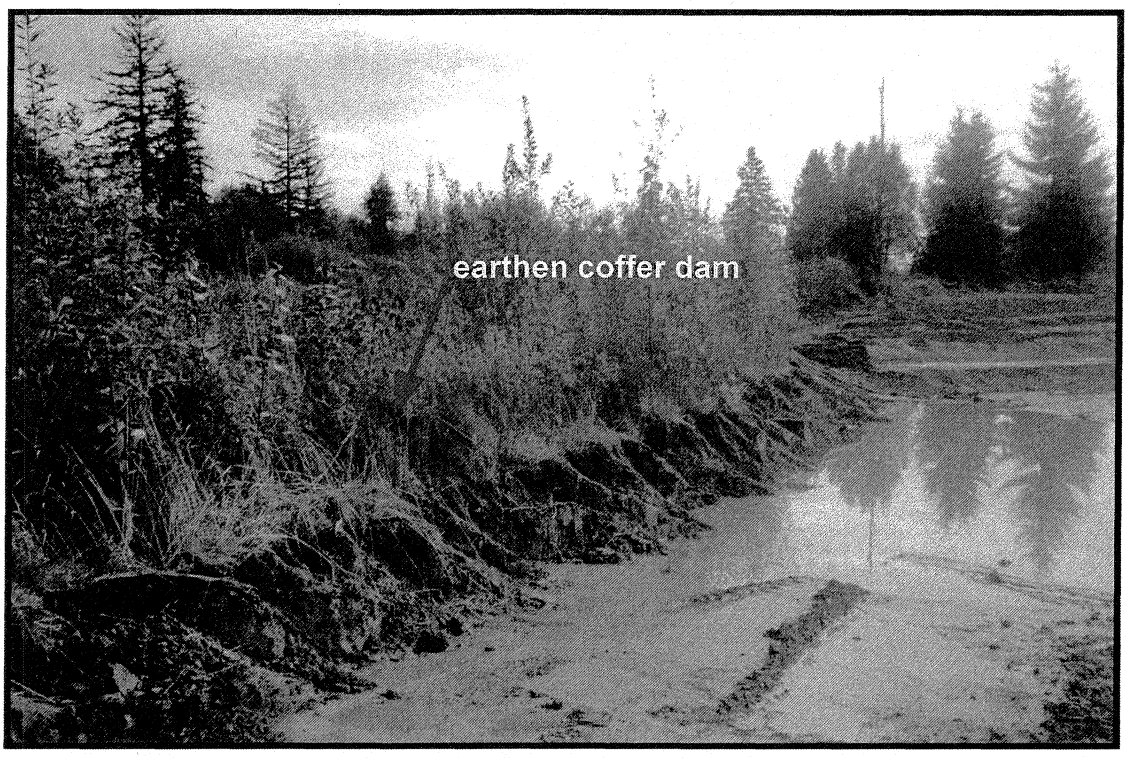

Photograph 1. Looking east at earthen coffer dam separating pond works from existing pond (September 12, 2000).

Photograph 2. Looking north at excavated pond and topsoil placement (September 21, 2000).

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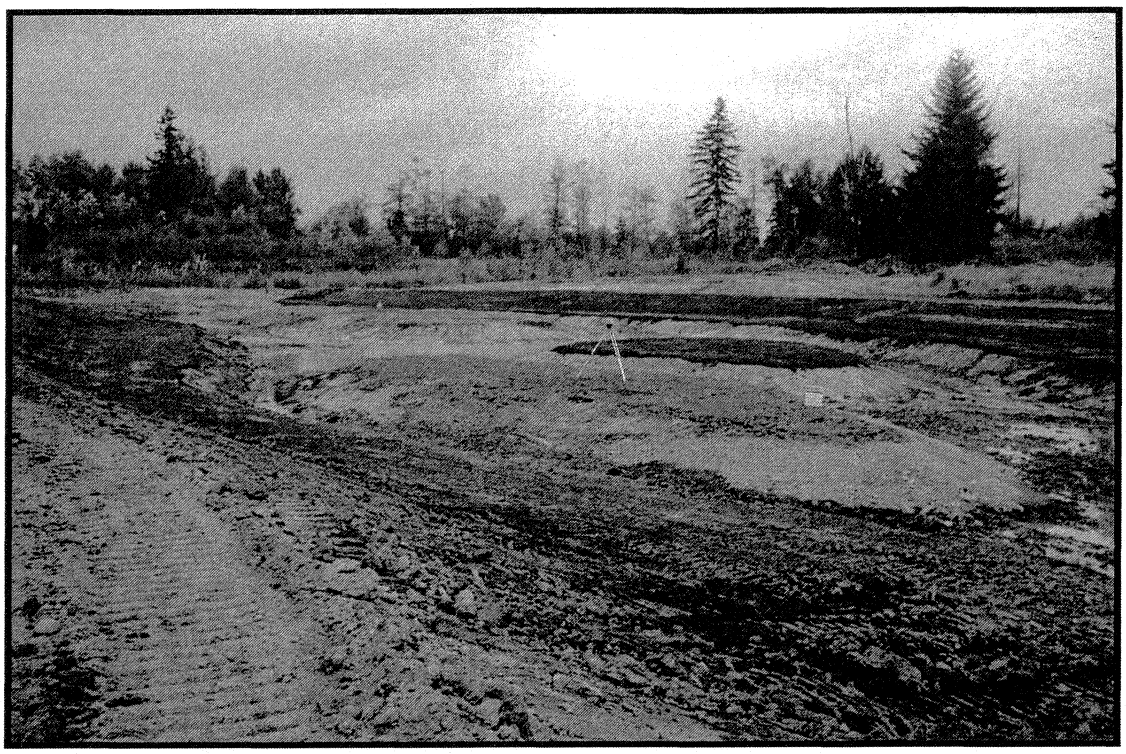
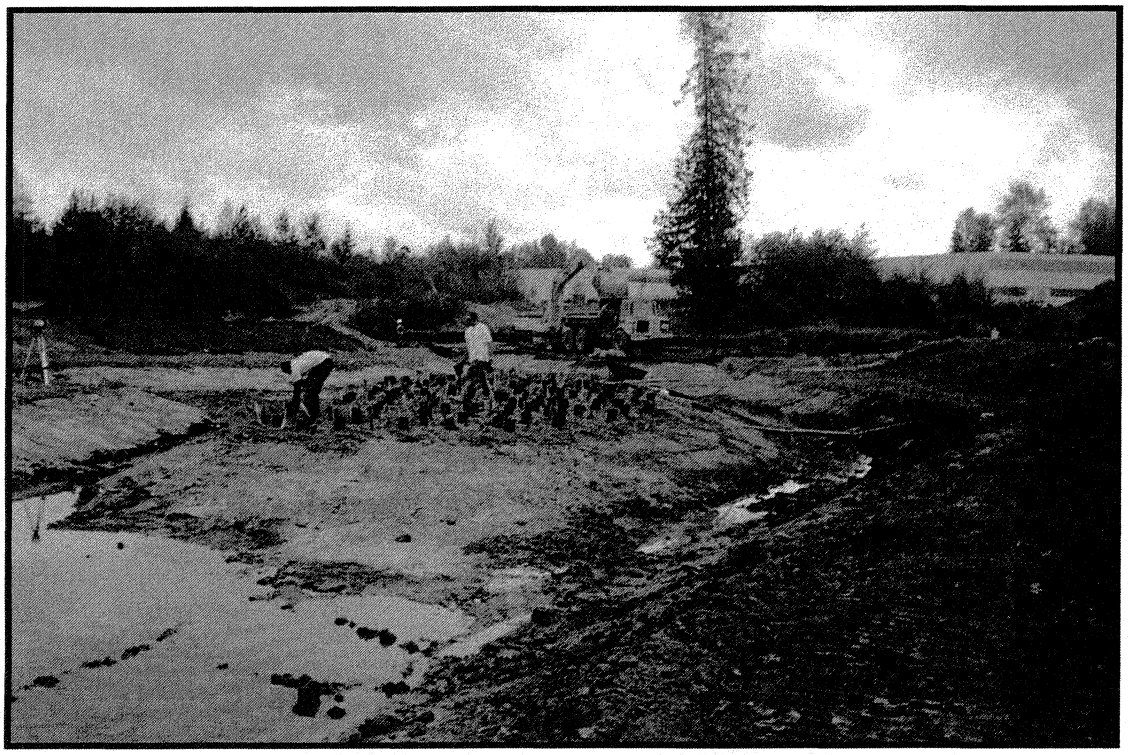


Photograph 3. Looking northeast at excavated pond and islands (September 21, 2000).



Photograph 4. Looking north at planting works on islands prior to introduction of flows (September 28, 2000).

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Photograph 5. Looking north at realigned channel south of constructed pond (October 13, 2000). Note riparian planting and hydroseeding.

Photograph 6. Looking east at realigned channel west of constructed pond (October 13, 2000). Note riparian planting and hydroseeding.

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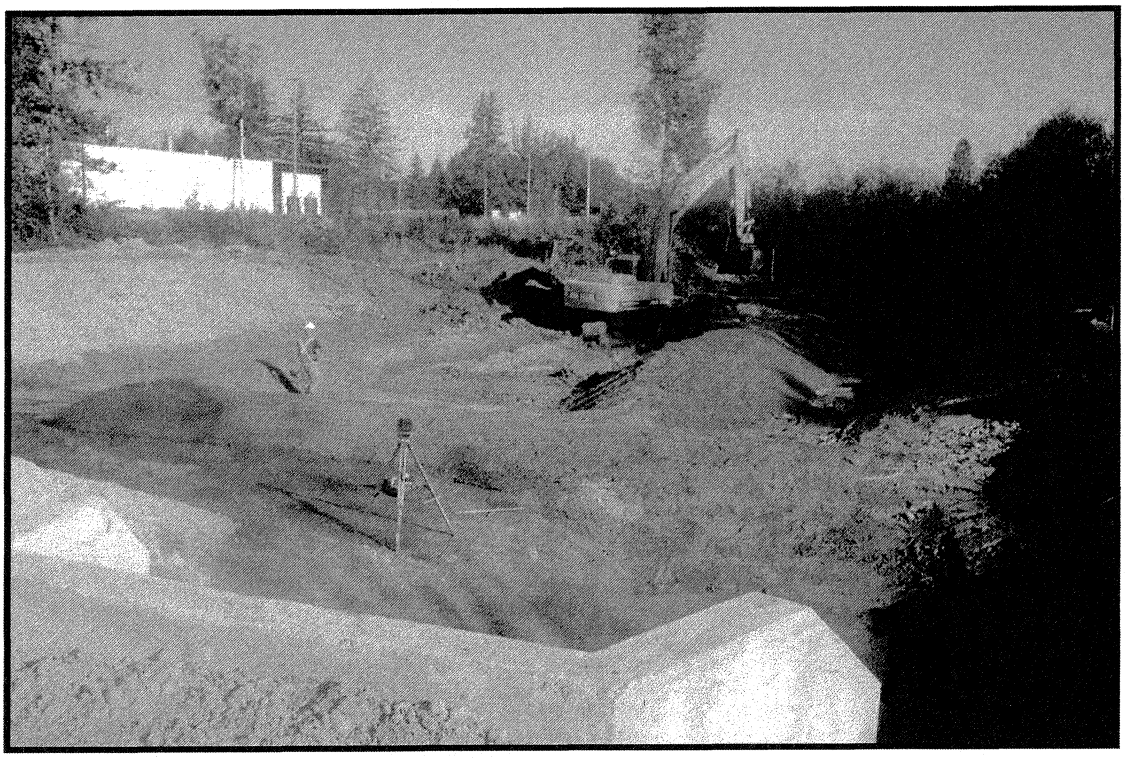
Photograph 7. Looking north at diversion ditch conveying flows around west biofiltration wetland works (September 12, 2000). Note photograph taken prior to installation of silt fence.



Photograph 8. Looking north at construction of west biofiltration wetland (September 25, 2000).

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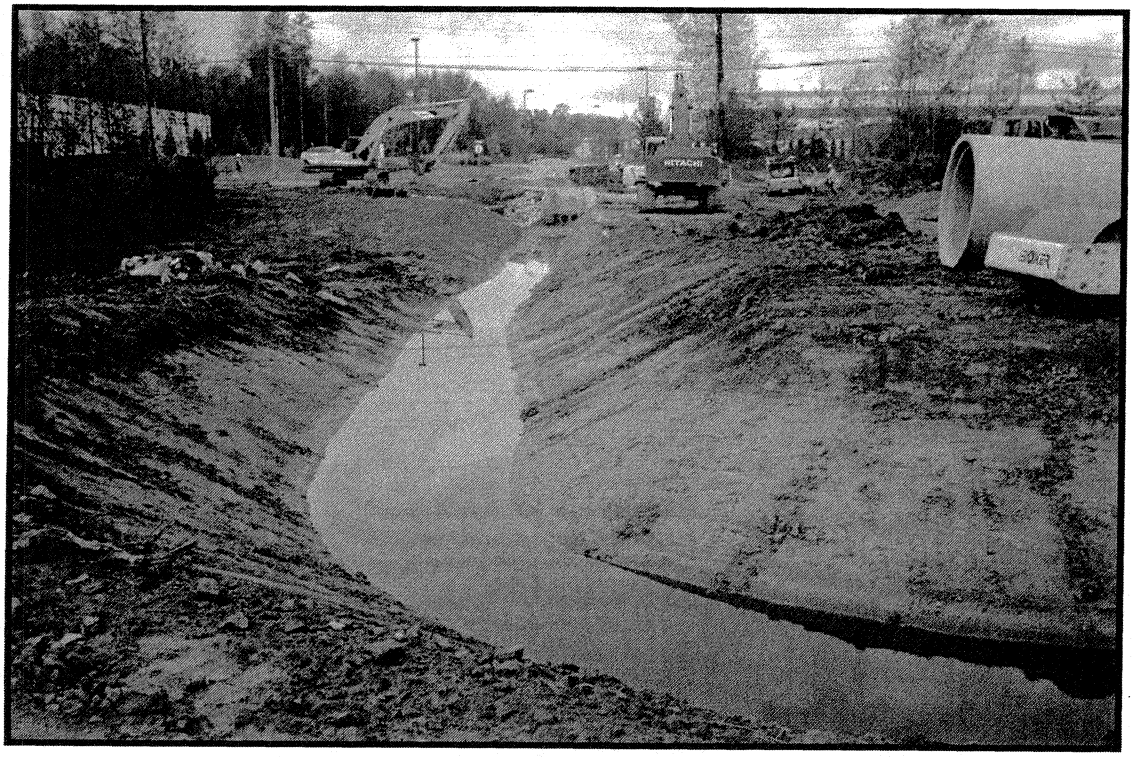
Photograph 9. Looking northeast at west biofiltration wetland prior to introduction of flows (September 28, 2000).



Photograph 10. Looking west at constructed temporary ditch upstream of west biofiltration wetland (October 2, 2000).

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Photograph 11. Looking south at the channel construction associated with realignment of unnamed east watercourse (September 25, 2000).

Photograph 12. Looking south at the constructed channel associated with realignment of nnamed east watercourse prior to introduction of flows (September 28, 2000).

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Photograph 13. Looking south at the constructed channel associated with realignment of unnamed east watercourse (October 26, 2000). Note hydroseeding and riparian planting.

Photograph 14. Looking north at the constructed channel associated with realignment of unnamed east watercourse (October 26, 2000).

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ATTACHMENT C
GLOUCESTER INDUSTRIAL ESTATES YEAR 2001 CONSTRUCTION WORKS PHOTOGRAPHS

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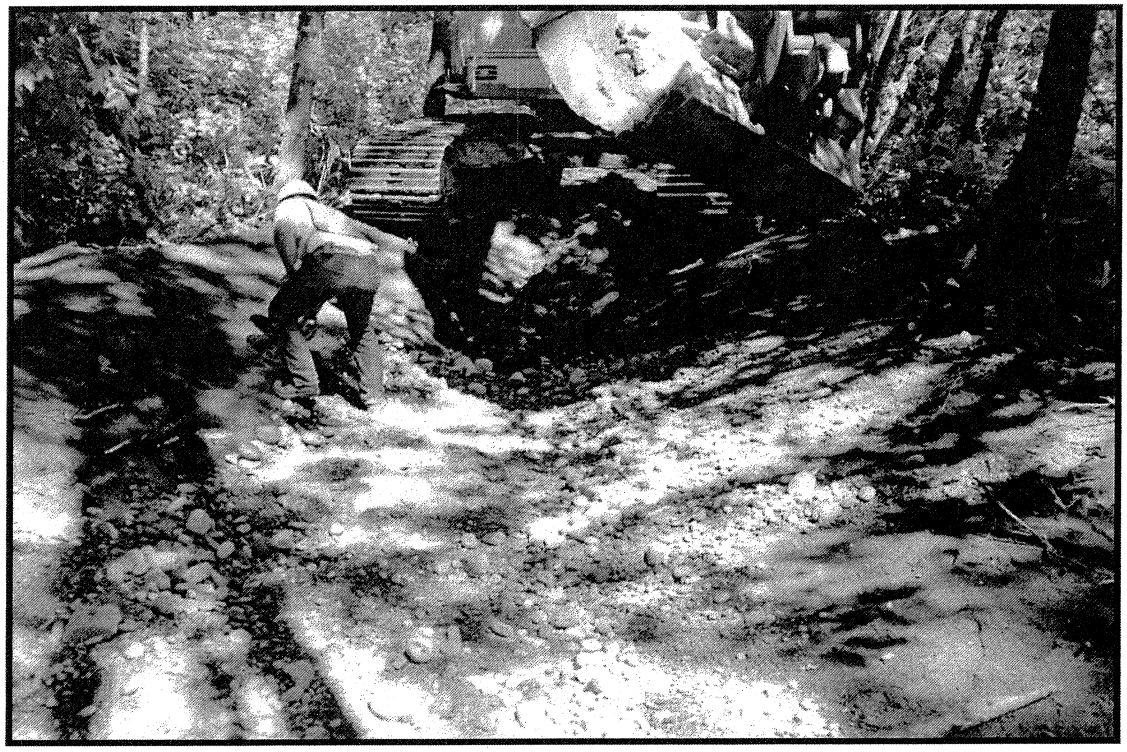

Photograph 1. Looking north at channel excavation and construction associated with realignment and enhancement works on the existing watercourse in the northeast quadrant (July 5, 2001).

Photograph 2. Looking south at constructed channel downstream of existing wetland (July 9, 2001).

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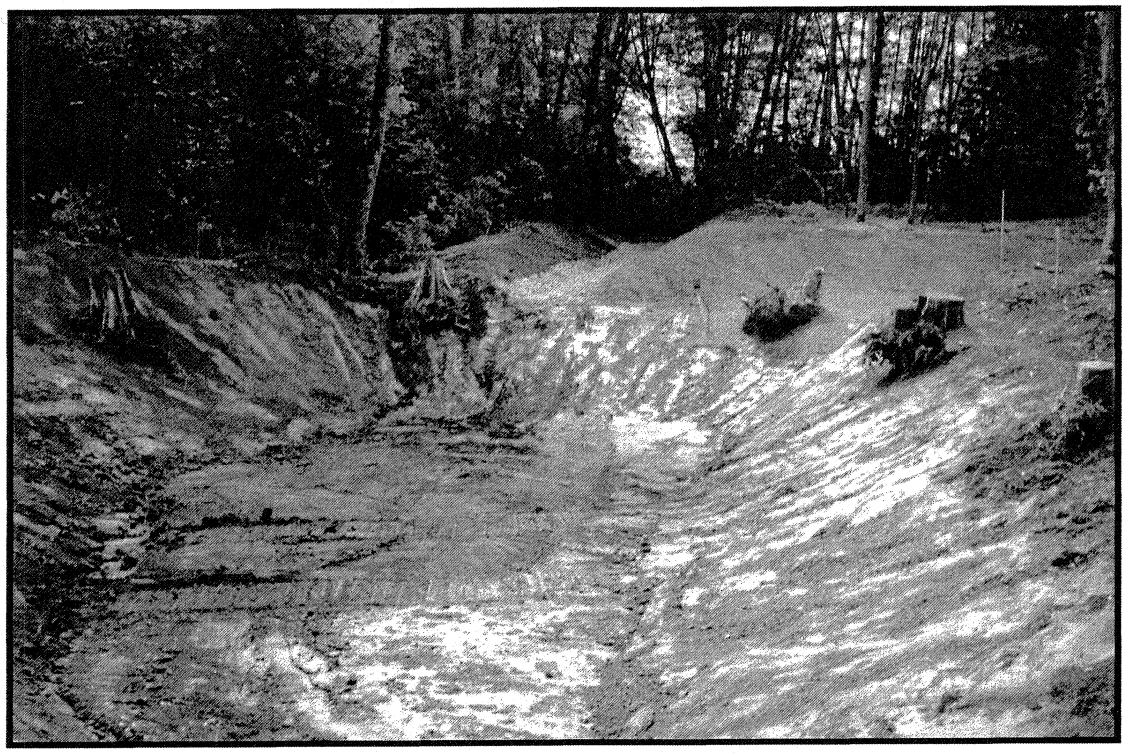

Photograph 3. Looking south at excavated south pond (July 12, 2001). Note placement of rootwads.

Photograph 4. Looking north at construction of south pond (July 12, 2001).

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Photograph 5. Looking west at newly constructed south pond and wetland (October 23, 2001). Note riparian planting.

Photograph 6. Looking north at newly constructed north pond (October 23, 2001). Note riparian planting.

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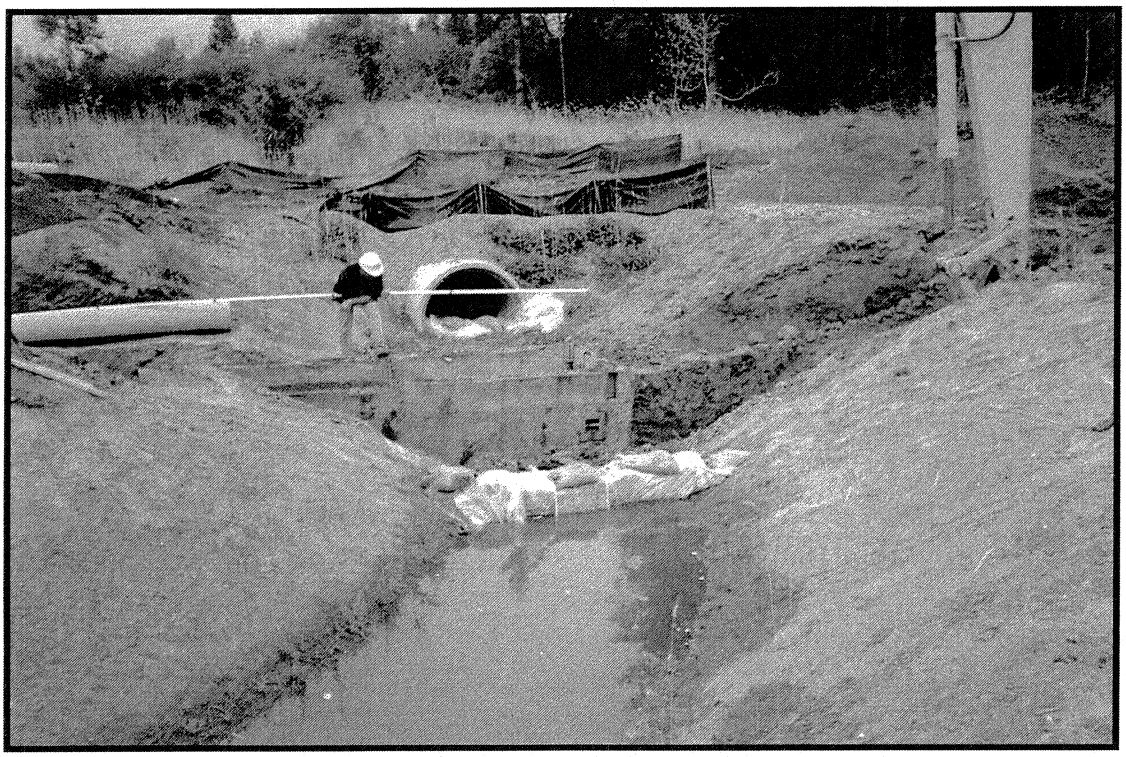
Photograph 7. Looking west at temporary ditch prior to enclosure (July 24, 2001).



Photograph 8. Looking north at excavation works prior to enclosure of temporary ditch (July 24, 2001). Note sandbag dams wrapped in polyethylene.

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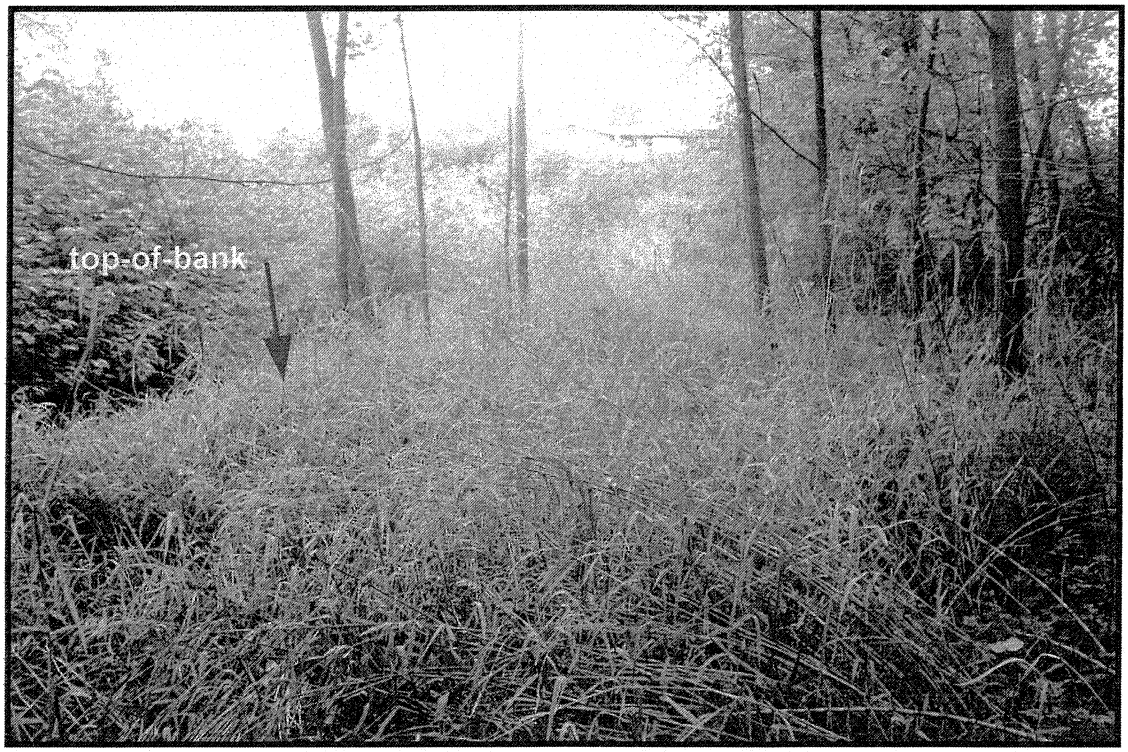
s.19(1)

Photograph 9. Looking east at grouting works associated with manhole (July 26, 2001).



Photograph 10. Looking west at top-of-bank of channel downstream of west biofiltration wetland prior to channel clearing works (August 28, 2001).

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Photograph 11. Looking west at top-of-bank of channel downstream of west biofiltration wetland post channel clearing works (August 28, 2001). Note excavated material has been flattened out and riparian shrubs have been retained.

Photograph 12. Looking west at completed channel clearing works within channel downstream of west biofiltration wetland (August 28, 2001).

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ATTACHMENT D
GLOUCESTER INDUSTRIAL ESTATES
2001 HABITAT MONITORING PROGRAM
WATERCOURSE A – PHOTOGRAPHS

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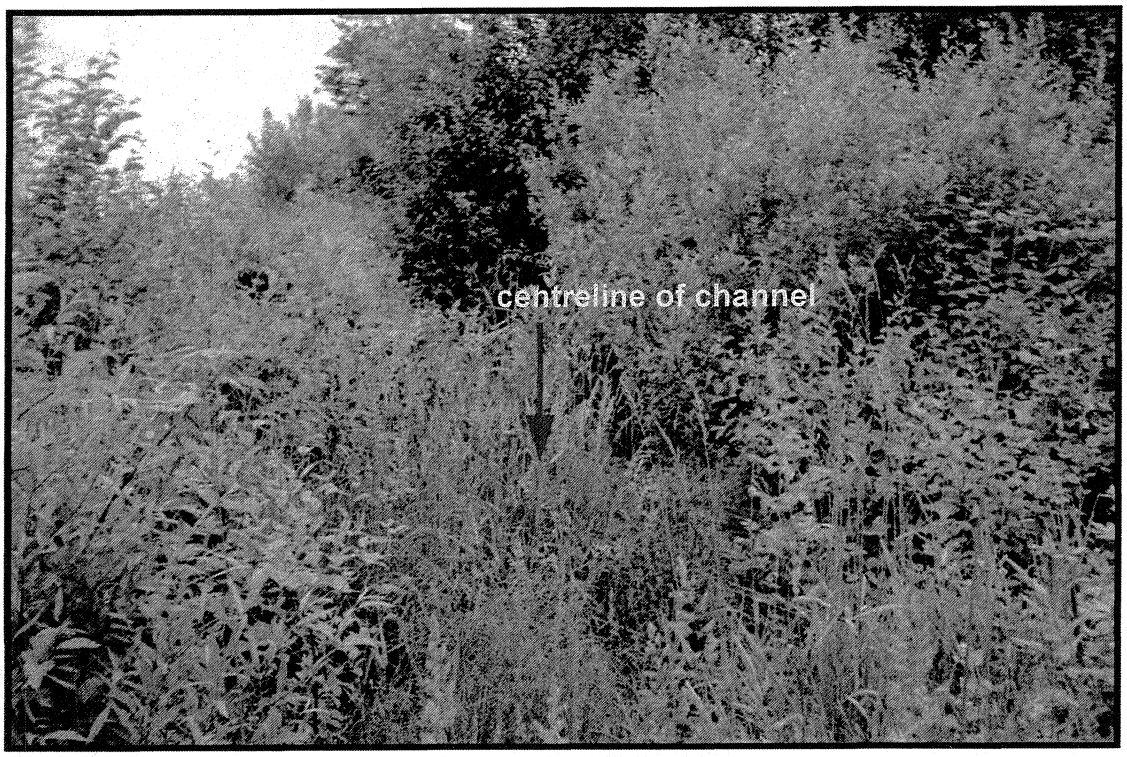
Photograph A1. Looking northeast at Watercourse A (June 26, 2001). Note abundance of cattail and red alder within the channel and on the banks, respectively.



Photograph A2. Looking west at Watercourse A (June 26, 2001).

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ATTACHMENT E
GLOUCESTER INDUSTRIAL ESTATES
2001 HABITAT MONITORING PROGRAM
WATERCOURSES B, C, D, and E – PHOTOGRAPHS

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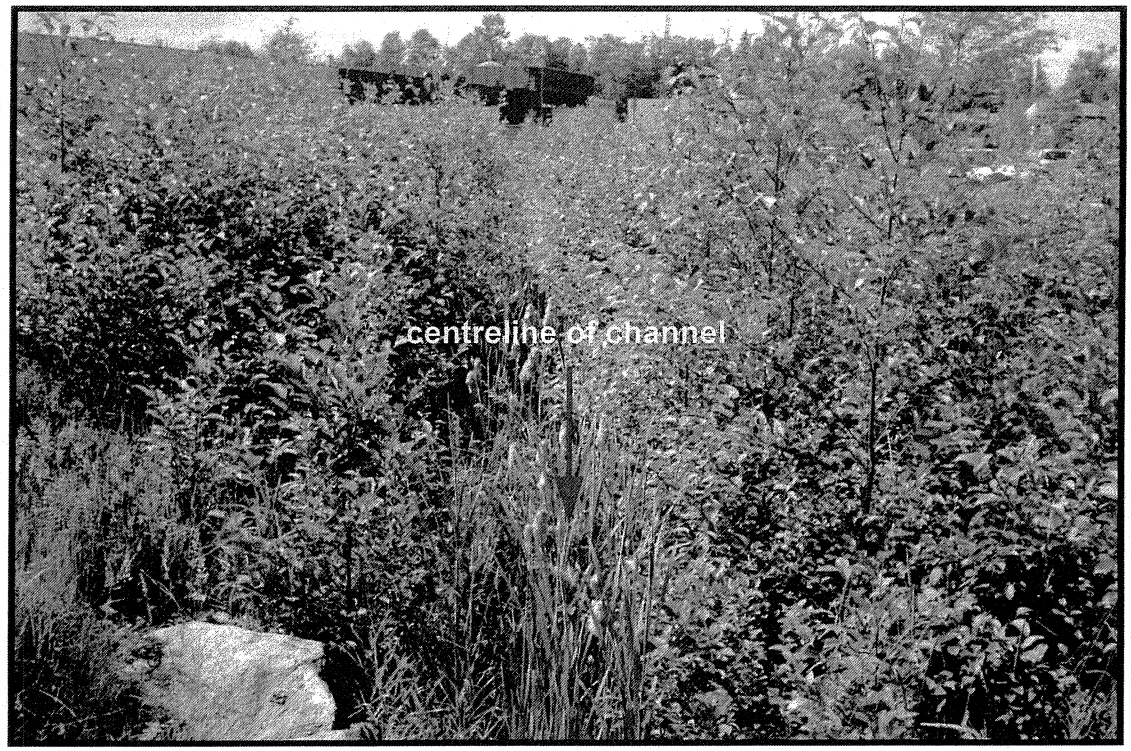

Photograph B1. Looking north at Watercourse B from Gloucester Way (June 26, 2001). Note abundance of cattail and red alder within channel and along banks, respectively.

Photograph B2. Looking north at Watercourse B from approximately 50 metres north of Gloucester Way (June 26, 2001).

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Photograph C1. Looking north at constructed wetland (Watercourse C) south of Gloucester Way (June 26, 2001).

Photograph D1. Looking south at Watercourse D from Gloucester Way (June 26, 2001). Note abundance of red alder.

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Photograph E1. Looking north at Watercourse E from Gloucester Way (June 26, 2001).

Photograph E2. Looking south at Watercourse E approximately 80 metres north of Gloucester Way (June 26, 2001).

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ATTACHMENT F
GLOUCESTER INDUSTRIAL ESTATES
APPROVAL DOCUMENTS

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Fisheries and Oceans

Pêches et Océans

Authorization # 99-HPAC-PA2-000-000217
MELP File #A2004880

AUTHORIZATION FOR WORKS OR UNDERTAKINGS AFFECTING FISH HABITAT

s.19(1)

Authorization issued to:

Name: 161884 Canada Inc.: Gloucester Industrial Estates (herein also referred to as "Gloucester")

Address: 310 - 1001 West Broadway, Vancouver, BC V6H 4B1

Contact: [redacted]

Telephone: (604) 856-3156

Facsimile No: (604) 856-3384

Location of Project:

Tributaries to West and Nathan creeks within the Gloucester Industrial Estates in Langley, generally encompassing lands north of the Trans-Canada Highway, west of the Langley-Abbotsford boundary, east of 264th Street and south of 60th Avenue.

Valid Authorization Period:

The valid authorization period for the harmful alteration associated with various land development activities is from 01 May, 2000 through 15 September, 2005.

As specified herein, this document only authorizes the destruction of the fish habitat and associated compensatory works until 15 September, 2005. If any phase of the project is not completed by that date, such that fish habitat may be affected, a new application pursuant to Section 35(2) of the Fisheries Act may be required. Should this Authorization expire without the works proceeding, and no alterations to the project design or DFO policy, legislation and/ or guidelines have occurred, an amendment for an extension to this authorization may be considered.

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Description of Works or Undertakings:

The harmful alteration hereby authorized includes a number of undertakings which are listed below and numerically referenced to a plan of existing drainage (refer to ECL Drawing No. 467-02-11, Rev. 03, attached in Appendix A).

In the Northeast Quadrant of the development -

Site 1. realignment and permanent elimination of riparian vegetation associated with the fisheries sensitive zone (i.e. relaxation of the setback boundary) adjacent to a watercourse;
Site 2. elimination of a watercourse; and,
Site 3. elimination of a ravine, elimination of a portion of a wetland, and permanent elimination of riparian vegetation associated with the fisheries sensitive zone (i.e. relaxation of the setback boundary) adjacent to a wetland.

In the Southeast Quadrant of the development -

Site 8. elimination of a watercourse;
Site 9. realignment of a watercourse;
Site 10. elimination of a watercourse; and,
Site 23. elimination of 5 m of watercourse.

In the Southwest Quadrant of the development -

Site 11. elimination of a watercourse;
Site 12. elimination of a watercourse;
Site 13. elimination of a pond;
Site 14. elimination of a pond;
Site 15. elimination of a pond;
Site 16. elimination of a pond and watercourse;
Site 17. realignment of a watercourse;
Site 18. elimination of a watercourse;
Site 19. elimination of a pond and watercourse;
Site 20. elimination of a pond;
Site 21. elimination of riparian vegetation; and,
Site 22. elimination of a watercourse.

These works are more specifically described in the following submissions and drawings:

Appendices:

a). Appendix A: ECL Envirowest Consultants Limited (ECL) Drawing No. 467-02-11, Revision 03 entitled "Existing Drainage" dated May 2000, and ECL Dwg No. 467-02-12, Revision 05 entitled "Ultimate Drainage", dated May 2000;

b). Appendix B: Habitat balance prepared by ECL;

c). Appendix C: The application for Environmental Review submitted by ECL on behalf of

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161884 Canada Inc., dated June 8, 1999;

d). Appendix D: ECL Drawing Nos.:
- 467-06-01R (dated March 1999);
- 467-02-09, Revision 00 (dated April 12, 1999);
- 467-04-06, Revision 01 (dated August 27, 1998);
- 467-02-08, Revision 01 (dated September 13, 1999);
- 467-02-10A, Revision 01 (dated August 9, 1999);
- 467-02-10B, Revision 01 (dated August 9, 1999);
- 467-02-13, Revision 00 (dated May 8, 2000);
- 467-02-14, Revision 00 (dated May 8, 2000);
- 467-02-15, Revision 00 (dated May 8, 2000);
- 467-02-16, Revision 00 (dated May 8, 2000);
- 467-02-17, Revision 00 (dated May 8, 2000).

e). Appendix E: Aplin & Martin Consultants Ltd. Drawing Nos. 96025SR-1, Revision 1; 96025SR-2, Revision 2; and 96025SR-3, Revision 2, all dated May 1997;

s.20(1)(b)

f). Appendix F: Hunter Laird Engineering Ltd. Job No. 4518, Sheets 9 of 14 and 10 of 14, both Revision A and dated July 29, 1999.

g). Appendix G: Copies of Letters of Credit totalling [redacted] and the Letter of Credit Reduction Schedule;

h). Appendix H: Copies of the restrictive covenant documents, registered in favour of the BC Ministry of Environment, Lands and Parks under Section 219 of the provincial Land Titles Act;

i). Appendix I: Gloucester Industrial Estates 1998 Stormwater Management Plan: Final Report by Stantec Consulting Ltd.

Schedules:

Schedule A: DFO/ MELP Riparian Planting Guidelines.

Conditions of Authorization:

1. Gloucester confirms that all plans and specifications relating to this Authorization have been duly prepared and reviewed by appropriate professionals working on behalf of Gloucester. Gloucester acknowledges that it is solely responsible for all design, safety and workmanship aspects of all of the works associated with this Authorization.

2. Gloucester confirms that the location and general design of the works are to be consistent with the information provided to the agencies and that any material deviations from such designs must be reviewed and approved by all agencies having jurisdiction in this matter.

3. The conditions of this Authorization notwithstanding, DFO may at any time and at their

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sole discretion, direct the Gloucester and/ or their agents and/ or contractors, to suspend or alter any work or activity associated with this project, to avoid or mitigate adverse impacts to fisheries resources. Further, DFO may at any time and at their sole discretion direct the Gloucester and/or their agents and/ or their contractors, to carry out at the Gloucester's own expense any works or activities deemed necessary by DFO to avoid or mitigate adverse impacts to fisheries resources.

4. DFO must be notified of any future modifications to the existing drawings referred to in this Authorization and upon notification, may require plans and specifications to review and/ or approve prior to any work commencing.

Conditions that relate to works in or near watercourses:

5. Instream works may only be undertaken during the period between 01 August and 15 September of any year of this development. Any extensions to the work window will be considered on a case by case basis (season and weather dependent) and must have approval for extension from DFO and/ or MELP. An environmental monitor must be present full time during all instream works, unless otherwise agreed to by DFO and/ or MELP. The environmental monitor must have the authority to alter or halt works should they feel the works are detrimental to fisheries resources. Gloucester must provide a copy of the written authority, providing the name of the environmental monitor, contact number and a brief outline of relevant experience related to the proposed works to DFO, MELP and the Township.

6. All other works within the fisheries sensitive zones (i.e. setback areas) must be monitored daily during construction and during or following any storm event which may occur during the construction phase.

7. The environmental monitor must have experience in stream construction or restoration as well as sediment and erosion control.

8. All instream work must be undertaken and completed in isolation of flowing water. Generally, this is accomplished by diverting, enclosing or pumping the water around the work site. Flow to downstream portions of the stream must not be cut off at any time during construction. In addition, the point of discharge to the creek must be located immediately downstream of the work site.

9. Prior to commencement of instream works, an environmental consultant or other qualified professional who is acceptable to DFO and/ or MELP must conduct a fish and amphibian salvage in and around areas potentially affected by siltation or de-watering. Appropriate fish collection permits must be obtained prior to any instream works commencing. The consultant/monitor must ensure that the appropriate DFO and MELP staff have been contacted and are advised of the commencement of instream works.

10. Sediment and erosion control measures must be installed to the standards outlined in the BC Environment/DFO "Land Development Guidelines for the Protection of Aquatic Habitat". All work must be conducted in a manner that will prevent the release of sediment or sediment-laden water into any watercourse.

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In this regard, a sediment, erosion and runoff control plan must be prepared by a qualified, trained professional and implemented prior to any site preparation works and/ or construction. These facilities must be maintained until the occupancy permit stage, or until no longer applicable to the site conditions. These facilities must be maintained and be working adequately to control discharges from the site.

11. All disturbed areas within the leavestrips should be hydro-seeded or covered to prevent surface erosion. If work is undertaken late in the growing season, normal seeding may not be effective in preventing surface erosion. In this regard, the entire disturbed area may require stabilization through hydro-seeding with heavy mulch or by installing geotextile seed mats.

12. All constructed streambank slopes must not exceed 2:1 slopes (horizontal: vertical). All constructed slopes must be covered with a minimum 6" topsoil to ensure a reasonable plant growth medium, and an appropriate native seed mixture and biodegradable geotextile or hydro-seed (if deemed necessary by a qualified professional) to ensure stability.

13. Riparian revegetation must be completed in accordance with the specified plans, attached in Appendix D. Any other disturbed areas within the leavestrip areas, which are not included in a specified revegetation plan, must be replanted in accordance with the DFO/ MELP guidelines for riparian revegetation, attached as Schedule A.

14. Machinery is not permitted to work within the wetted perimeter of the stream. All machinery on the site must be in good repair and free of excess oil and grease. No fuels lubricants, construction wastes or other deleterious substances may enter the watercourse at any time. Emergency spill kits must be kept on site and be readily accessible at all times in case of release of a deleterious substance to the environment. Any spill of reportable quantities must be immediately reported to the Provincial Emergency Program (24 hour phone line: 1-800-663-3456).

15. All construction materials, such as fill or riprap, must consist of inert materials. Rock used as riprap must be durable and suitably graded to resist movement by stream flow. Rock and/ or riprap placement must be completed so as to ensure their stability within the creek system.

16. Topsoil, debris from construction, concrete and/ or concrete leachate, overburden, soil, grout, oil, grease or any other substance deleterious to aquatic life must be disposed of or placed in a manner that will prevent their entry into any watercourse, ravine, floodplain, or storm sewer system.

    In this regard, DFO notes that if any cast in place concrete works are to be undertaken, there may exist high potential for concrete and/ or concrete leachate to enter a watercourse. Concrete leachate is alkaline and highly toxic to fish and aquatic life and DFO requires that measures be taken to prevent any incidence of concrete from entering the watercourse. In case of emergency, a concrete buffer, such as CO2, must be kept on site to mitigate any impacts from the escape of concrete. To ensure that no concrete or concrete leachate impacts downstream fish or fish habitat, DFO advises that the downstream pH be monitored regularly until completion of the works. If a significant change in pH is noted (i.e. pH below 5.0 or above 9.0), then emergency measures must

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be implemented to neutralize pH levels. In addition, any concrete that does escape must be cleaned out of the channel immediately. All concrete work must be carried out during dry weather and low water conditions.

17. Any future stream crossings must be clear span bridges, bottomless arch culverts, or oversized culverts with a minimum 300-mm depth of gravels throughout, unless otherwise approved by DFO and MELP. Approval for stream crossings will be considered on a site by site basis.

18. ***The following personnel must be contacted and advised of any instream works or works within the fisheries sensitive zone (i.e. setback areas), a minimum of five (5) days in advance of the commencement of works.*** In addition, DFO and/ or MELP must be contacted for site inspection for any relocated or constructed watercourses prior to the release of water into newly constructed habitat:

a) The Fishery Officer in charge of the Fraser Valley West Field Office at tel: (604) 607-4160 or fax: (604) 607-4199;
b) The DFO Habitat Biologist for the Langley area at tel: (604) 666-6310 or fax: (604) 666-6627 (current contact Suzanne Thorpe); and,
c) The MELP Fish and Wildlife Habitat Protection Officer for the Langley area at tel: (604) 582-5239 or fax: (604) 930-7119 (current contact John Summers).

19. For any 'individual' project completed within the specified time period, the environmental monitor must submit three (3) copies of a 'summary' monitoring report to MELP and one (1) to this Department within 90 days of project completion.

As described herein, Site numbers 1 through 23 represent 'individual' projects, as do each of the compensatory sites A through D; however, the sites may be listed and detailed within the same monitor's report, if undertaken within the same calendar year. The monitor's report must indicate that the project has been completed and shall include the following:

a) a complete list of all outstanding or incomplete works for any 'project' as defined herein;
b) date-stamped photos of the site(s) before, during and after construction;
c) date-stamped photos of the site post-planting;
d) confirmation of compliance with the Authorization; and,
e) details of any difficulties encountered and how they were handled.

20. In the event of any significant incident(s) which may occur during works associated with this project (i.e. oil/ gas spill, slope failure, sediment or erosion control problem), the environmental consultant should notify both DFO and MELP representatives as soon as possible. All emergency-reporting procedures must be followed on an immediate basis. The environmental monitor should have an emergency call out procedure in place prior to the commencement of works.

21. The environmental monitor must post a readily visible sign identifying their company name and telephone number at the entrance(s) to the site.

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22. ***A copy of this Authorization must be forwarded to all contractors and/or crew supervisors and must be present on the site while work is proceeding.***

23. ***It is understood that by proceeding with the works specified herein, the applicant's agent(s) and/ or contractor(s) and their work crews, shall have indicated an understanding of and agreement to the conditions within this Authorization, and that both DFO and MELP have the authority to inspect, and if necessary, stop any works that are not in compliance with the agreed to terms and conditions or if the agencies have fisheries related concerns.***

Conditions relating to stormwater management for development:

24. Design of the stormwater system shall be consistent with final approval of the document "Gloucester Industrial Estates Stormwater Management Plan: Final Report" by Stantec Consulting Ltd. (attached as Appendix I), currently under review. Detailed engineering design of the stormwater system must be reviewed and approved by DFO, MELP and the Township of Langley prior to site development.

25. Water treatment shall be provided for all areas not zoned or developed for industrial purposes as at May 1, 2000. Treatment will occur in first-flush treatment wetlands where feasible, while other areas will be treated by on-site oil-water separators. Envirowest Drawing No. 467-02-13 indicates treatment type for all lands within Gloucester Estates. Envirowest Drawing Nos. 467-02-14, 467-02-15, 467-02-16 and 467-02-17 provide details for first-flush treatment wetlands.

26. Stormwater from most of the Gloucester Estates development will be detained in two large detention features to be located within the golf course. Properties downstream, or outside of the catchments of these two areas must provide onsite detention that meets or surpasses the specifications outlined in the "Land Development Guidelines for the Protection of Aquatic Habitats".

27. Stormwater outfalls must be set back at least three (3) metres from the streambank and at an angle of approximately 45 degrees to the direction of stream flow. The outfall channel should be armoured with clean angular rock or other type of energy dissipater and stream bank stabilization, as approved by MELP.

Conditions relating to the Restrictive Covenant/ Leavestrip Area:

28. All leavestrip areas shown on ECL Drawing No. 467-02-12 will be protected by a restrictive covenant to be registered against the title of the property(ies) affected under Section 219 of the Land Titles Act, as per the requirements of MELP. All leavestrips are to be left in a totally undisturbed, naturally vegetated state in perpetuity. The covenant boundary must be surveyed by a registered BC Land Surveyor and a permanent fence must be constructed at the covenant boundary between development areas and the covenant areas prior to the commencement of any site development, unless otherwise agreed to by MELP.

29. After the compensatory habitat is functioning as intended, Gloucester shall not carry on any work or undertaking that will adversely disturb or impact the compensatory habitat,

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and it will take all reasonable steps to ensure that the compensatory habitat is not disturbed by others, so long as Gloucester is associated with Gloucester Industrial Estates.

30. Buildings must be set back a minimum of one and one-half (1.5) metres from the restrictive covenant boundary, except to the north of the railway tracks where buildings are to be setback a minimum of five (5.0) metres from the restrictive covenant boundary.

Conditions that relate to all mitigatory and compensatory habitats:

31. The compensatory habitats shall consist of a number of features which are listed below and numerically referenced to a plan of ultimate drainage (refer to ECL Drawing No. 467-02-12, Revision 03, attached in Appendix A). These works are also described in the Habitat Balance (Appendix B). Design drawings are referenced for each project on the ultimate drainage plan.

In the Northeast Quadrant of the development -

Compensatory Site A, located at or near Site 1:

- Enhancement of an existing watercourse, including partial realignment, wetland/pond creation and riparian enhancement (refer to ECL Drawing No. 467-06-01R, dated March 1999). This watercourse discharges to the existing roadside ditch at 60th Avenue, subsequently flowing in a culvert under 60th Avenue.

- Native shrubs shall include a mix of species (minimum size #2 pot) including snowberry, red elderberry, salmonberry, red-flower currant, pussy willow, red-osier dogwood and thimbleberry (no species to consist of more than 20 percent of the total). Live stakes shall be planted at a density of 5 stakes per square metre.

- Large woody debris (tree, log and rootwad) placement will be undertaken as directed by the environmental consultant. All large woody debris will be placed in such a manner so as to ensure that they are appropriately keyed into the sides of banks or are otherwise stable. Rootwads should be placed so that the gnarly portions of the root mass are below the wetted perimeter of the creek/ pond area, thus providing maximum refuge cover for juvenile salmonids. Trees and logs must have a minimum diameter of 350 mm; rootwads a minimum diameter of 2.0 metres.

- Marsh planting in the northeast quadrant of the development will be undertaken as per the specifications indicated on ECL Drawing 467-02-10A (species list). All wetland planting will meet the minimum density criteria of 4 plants per square metre. Marsh planting may be undertaken early in the spring planting season post construction, provided that appropriate sediment control measures are undertaken throughout the winter season to prevent downstream sedimentation from such areas. Marsh planting must be completed by April 30, the end of the spring planting season.

In the Southeast Quadrant of the development -

Compensatory Site B, located at or near Site 9:

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- Re-alignment of a watercourse, including development of pools (each with two rootwads) at 30 metre intervals, boulder complexing (minimum 6 boulders per 30 metre interval), and riparian enhancement (refer to ECL Drawing No. 467-02-09, Revision 00, dated April 12, 1999, and Hunter Laird Engineering Ltd. Job No. 4518, Sheets 9 of 14 and 10 of 14, both Revision A and dated July 29, 1999.

- A 1 metre wide strip on each side of the channel/pools is to be live-staked with a combination of red-osier dogwood and willow at a density of 5 stakes per square metre. Densities for trees and shrubs shall be one per five square metres and one per one square metre, respectively. Trees shall be increased in number to ten percent of total plants. Salvaged plant material may be used as an alternative to nursery stock, provided that it meets the required success rate.

- Rip rap is to be deleted from the side slopes of the pools; refer to ECL Dwg. #467-02-09.

- Boulder and boulder cluster placement will be undertaken as per the direction of the environmental consultant. Boulder complexing should be undertaken to provide fish habitat, direct flow, promote flushing, prevent infilling and to ensure bank stabilization, where necessary. Boulders must be appropriately keyed into the sides of banks and placed to ensure they are stable. Boulder diameter may be varied, depending on stream cross-section and gradient, but must average 400mm.

In the Southwest Quadrant of the development -

Compensatory Site C, located at or near Site 11:

- Pond/wetland creation north of Gloucester Way within the lands designated as future golf course (refer to ECL Drawings 467-02-10A and 467-02-10B).

- Wetland plants shall be planted at a density of four plants per square metre and trees and shrubs at densities one per five square metres and one per one square metre, respectively.

- The configuration of the constructed habitat may be revised subject to advance notification to DFO and completion of a similar or greater amount of habitat.

- Large woody debris placement should provide a minimum average of 25% cover in pools/ wetland using either gnarly rootwads and/ or whole tree sections.

Compensatory Site D, located at or near Site 17:

- Re-alignment of a watercourse south of Gloucester Way (refer to Aplin & Martin Consultants Ltd. Drawing Nos. 96025SR-1, Revision 1; 96025SR-2, Revision 2; and 96025SR-3, Revision 2). The portion adjacent to Gloucester Way is to be located within a 15-metre wide corridor; habitat details for this portion are shown in ECL Drawing No. 467-04-06, Revision 01. Habitat details for the remaining portions are shown in ECL Drawing No. 467-02-08, Revision 01. The north-south portion is to be constructed with a corridor width of 25 metres. Wherever possible, existing trees and

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shrubs are to be retained along the margins of the new watercourse. Where existing vegetation is disturbed it will be re-planted in accordance with the specifications on ECL Drawing No. 467-02-08, Rev 01, and as detailed further herein.

- Deflector logs, aeration logs and rootwads shall each be installed in the channel at 10 metre intervals. Boulder clusters, each comprised of a minimum of four boulders of a minimum diameter of 400mm, are to be installed at 5 metre intervals.

- A one metre wide strip on each side of the channel is to be live-staked with a combination of red-osier dogwood and willow at a density of 5 stakes per square metre. Densities for trees and shrubs shall be one per five square metres and one per one square metre, respectively. Salvaged plant material may be used as an alternative to nursery stock.

- View/ access points around the constructed wetland/ pond areas at the "golf course" will be constructed so that access into and around the watercourse is discouraged. If access is or becomes problematic (i.e. interferes with the success of any aspect of the constructed habitat), additional measures may be required to prevent human encroachment into such areas (i.e. low fencing).

Conditions that relate to the monitoring/ evaluation program:

32. For each component of the overall habitat compensation plan, Gloucester shall carry out a monitoring program (the "Monitoring Program") which will extend for five (5) years post-construction and will include the following:

a) if a project only involves disturbance(s) to, or removal of, riparian revegetation, a brief report describing plant survivorship and including photos is required yearly to three (3) years post-planting.

b) an assessment of the physical stability (see details of b) below) of any newly constructed works must be conducted a minimum of two (2) times during the first winter, in November/ December and February/ March. Any non-compliance issues or other problems with any aspect of the functioning of newly constructed habitat or that may have a negative impact to fisheries resources (e.g. erosion, slope failures) must be reported to both DFO and MELP within five (5) working days post-inspection and remediation measures implemented immediately, as approved by DFO and/ or MELP;

c) an annual photographic (date stamped) assessment of the compensation habitat and physical stability of the works, noting any changes in the function of the habitat for five (5) years post-construction. The assessment should also include looking for any evidence of erosion, slumping, tension cracks, movement of instream structures, bed material changes, sediment or debris accumulation and sediment transport changes. If gravels have been placed instream, an estimation of gravel depth, noting any changes, should be conducted each time the site is visited;

d) an annual assessment of the planted riparian vegetation for three (3) years post planting. Plant survival must be at least 80% for ground cover, forbs and shrubs

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and 100% for trees for the duration of the monitoring program. Should this survivorship not be achieved, additional planting is required to be undertaken immediately during the planting season of, or immediately following, the assessment;

e) measurements of water temperature, pH, dissolved oxygen, and rough estimate of water flow should be recorded each time the site is visited for monitoring;

f) for relocated and/ or constructed watercourses and ponds, fish sampling must be undertaken using baited minnow traps, or an acceptable alternative sampling method, a minimum of once annually during the time of year that will maximize potential to determine fish presence;

g) for relocated and/ or constructed watercourses and ponds, assessment of in-stream aquatic invertebrate populations must be undertaken a minimum of once annually during the 2nd (second) and 5th (fifth) years of the five (5) year monitoring program and during the time of year that will yield maximum diversity and quantity of invertebrate species (usually during the late spring/ early summer). Sampling should be conducted in riffle-type habitats at a minimum of three (3) locations (upper, middle and lower stream reach) if the stream section is 15 meters in length or longer; at a minimum of one (1) location if the stream section is less than 15 meters in length. Invertebrates collected are to be counted and identified to the to the Family level. Data from the invertebrate assessment shall be submitted in the monitor's report.

h) the Monitoring Program shall be conducted by a qualified biologist, or other professional who has experience in this area, and who is acceptable to DFO;

i) the provision to DFO of the annual results of the Monitoring Program in a written report, including an as built plan (where applicable), and any other relevant documents and photographs, by the first of December of each year of the Monitoring Program;

j) the fifth years monitoring report for any project shall provide the results of the final year's monitoring and shall summarize the findings of the five years of annual monitoring. The final report will provide a functional assessment of the performance of the compensatory habitat and will include photographs of the constructed compensatory works;

k) should any deficiencies in the compensatory habitat be identified by Gloucester, the environmental monitor, any agents or contractors working on behalf of Gloucester, DFO and/ or MELP, the parties shall notify one another in a timely manner. Any identified deficiencies with regard to the form or functioning of the compensatory habitat must be addressed in a timely manner and communicated in writing to DFO and/ or MELP, and resolved as per their direction.

l) should the clauses in 33 b) or c) be enacted, an additional annual and final monitoring report will be required in the two years following its enactment.

33. The compensatory habitat will be deemed to functioning as intended if, in the opinion of

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DFO,

- the habitat is physically stable;
- it functions as designed,
- riparian vegetation has achieved the targeted survivorship;
- that there is sufficient aquatic invertebrate production to function to provide, in the opinion of DFO, sufficient food and nutrients to downstream habitats; and,
- where fish accessible habitat has been constructed, the site functions to provide accessible habitat for salmonids.

Following the initial monitoring period, and any extensions thereof, DFO will assess the success of the compensatory habitat and determine whether of not it is functioning as intended, and choose the appropriate course of action as outlined below:

a) the compensatory habitat is functioning as intended and will be self-sustaining without further major remedial work. The Monitoring Program will be terminated; or

b) the compensatory habitat is not functioning as intended. Gloucester shall extend the Monitoring Program, including remedial work, for a minimum of an additional two years to allow more time for the habitat to become adequately established;

c) the compensatory habitat is not functioning as intended and further remedial work is not likely to rectify the situation. Gloucester shall then carry out alternative compensatory works of similar habitat value within the same watershed and requiring an additional monitoring period.

34. Gloucester shall ensure that the compensatory habitat is functioning as intended for the lifetime of Gloucester Industrial Estates. If at any time Gloucester becomes aware that the compensatory habitat is not functioning as intended Gloucester shall carry out any works which are necessary to enable the compensatory habitat to function as designed. If Gloucester transfers its interest in Gloucester Industrial Estates, and the transferee assumes the obligations of this Authorization in a form satisfactory to DFO, Gloucester shall thereafter be relieved of these obligations.

s.20(1)(b)

35. Gloucester has delivered to DFO two Letters of Credit totalling [redacted] These Letters of Credit are to be reduced in accordance with the Letter of Credit Reduction Schedule (refer to Appendix G).

36. If the conditions of this Authorization are not met, DFO may draw upon the letters of credit to ensure that the agreed upon terms and conditions of this Authorization are duly carried out.

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The holder of this authorization is hereby authorized under the authority of section 35(2) of the *Fisheries Act*, R.S.C., 1985, c.F.14, to carry out the work or undertaking described herein.

This authorization is valid only with respect to fish habitat and for no other purposes. It does not purport to release the applicant from any obligation to obtain permission form or to comply with the requirements of any other regulatory agencies.

Failure to comply with any condition of this authorization may result in charges under the Fisheries Act.

This authorization form should be held on site and work crews should be made familiar with the conditions attached.

Date of issuance: August 29, 2000

Approved by: for Dale Paterson

Title: Area Chief, Fraser River Division Habitat Unit
Habitat and Enhancement Branch

161884 Canada Inc. (Gloucester) acknowledges that Fisheries and Oceans Canada has consulted with it regarding the terms of this Authorization, and confirms that it has reviewed and understands the terms of this Authorization, and it will comply with them.

s.19(1)

Executed by an authorized signatory of 161884 Canada Inc. on the 24th/nd day of August, 2000 in the presence of:

[redacted]

Name (print):

Title (print):

161884 Canada Inc. (Gloucester)

[redacted]

Title (print)

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97-HPAC-PA2-0150
Authorization No.

AUTHORIZATION FOR WORKS OR UNDERTAKINGS AFFECTING FISH HABITAT

Authorization issued to:

Name: 161884 Canada Inc. ("GLOUCESTER")

Address: 5525 272nd Street, Langley, B.C. V4W 1P1

Telephone No.: (604) 856-3156

Location of Project

Tributary to West Creek 150 metres upstream of 58th Avenue and east of 268th Street, Langley. Development site is located on the 16900 Block of 58th Avenue, Langley.

Valid Authorization Period

The valid authorization period for the harmful alteration associated with culverting of the channel is from September 9, 1997 to September 30, 1997; the valid authorization periods for the other conditions of this authorization are as set out below.

Description of Works or Undertakings

The harmful alteration hereby authorized is enclosing 50 square metres of channel and alienating 1000 square metres of riparian vegetation in the headwaters of a tributary to West Creek located 150 metres upstream of 58th Avenue and east of 268th Street, Langley ,as more specifically described in the habitat balance sheet, sketch and Envirowest report dated August 31, 1995 "Biophysical Assessment of an unnamed tributary to West Creek, Township of Langley" attached as Schedule "A".

Conditions of Authorization

1. GLOUCESTER confirms that all plans and specifications relating to this Authorization have been duly prepared and reviewed by appropriate professionals working on behalf of GLOUCESTER. GLOUCESTER acknowledges that it is solely responsible for all design, safety and workmanship aspects of all of the works associated with this Authorization.

Conditions that relate to:

2. Sediment and erosion control measures must be installed to the standards outlined in the BC Environment/DFO "Land Development Guidelines for the Protection of Aquatic Habitat". All work must be conducted in a manner that will prevent the release of sediment or sediment laden water into any watercourse.

3. An environmental monitor must be present during all instream works. This monitor must have the authority to alter or halt works should they feel the works may be detrimental to fisheries resources.

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4. All work must be undertaken and completed in isolation of flowing water. Generally this is accomplished by diverting, enclosing or pumping the water around the worksite. Flow to downstream portions of the stream must not be cut off at any time during construction. In addition, the point of discharge to the creek must be located immediately downstream of the worksite.

5. A copy of this letter must be forwarded to the contractor/crew supervisor and must be present on the site while work is proceeding.

6. Machinery is not permitted to work within the wetted perimeter of the stream. All machinery used on site must be in good repair and free of excess oil and grease.

7. Topsoil, debris from construction, cement, grout, oil, grease or any other substance deleterious to aquatic life must be disposed of or placed in a manner that will prevent their entry into any watercourse.

8. The environmental monitor must forward a brief summary to this department indicating the project has been completed and outlining any difficulties encountered during the project.

9. All work must be carried out during favourable weather and low water conditions.

10. The flow from this catchment area must continue to be directed towards this tributary to West Creek, either through the adjacent property (Finning) or along the road frontage after culverting and must empty into the stormwater treatment/detention facility which will be located just upstream of 58th Avenue (to be constructed by others).

Conditions that relate to compensatory habitat:

11. The compensatory works shall consist of the construction of 87.5 square metres of high quality in-channel rearing habitat and 512.5 square metres of high quality riparian habitat on the golf course, north of Gloucester Way, East of 268th Street and immediately north of Lots 1 and 2.

12. The compensatory works described above shall be completed as described more specifically in the attached Envirowest drawing 467-04-03, dated August 19, 1997 attached to this Authorization as Schedule "B".

13. The compensatory works described above shall be commenced on or before September 9, 1997 and shall be completed on or before September 30, 1997.

14. GLOUCESTER shall carry out a monitoring program (the "Monitoring Program"), which includes the following:

    a) an annual photographic (date stamped) assessment of the compensation habitat and physical stability of the works. Monitoring will consist of, at least, visits to the site during in the five years from 1998 to 2002;

    b) an annual assessment of the planted riparian vegetation. Plant survival must meet or exceed 80% for shrubs and 100% for trees. Should this survivourship not be achieved additional planting is required to be undertaken as soon as the next planting season arrives;

    c) an assessment of physical stability should be undertaken annually and include looking for any evidence of erosion, slumping, tension cracks, movement of instream

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structures, bed material changes, debris accumulation and sediment transport changes;

d) measurements of dissolved oxygen, water temperature and a rough estimate of water flow should be recorded each time the site is visited for monitoring;

e) fish sampling must be undertaken using baited minnow traps once annually in the winter;

f) the Monitoring Program shall be conducted by a qualified biologist, or other professional who has experience in this area, and who is acceptable to DFO; and

g) the provision to DFO of the annual results of the Monitoring Program in a written report, including an as built plan, and any other relevant documents and photographs, by the first of May of each year of the Monitoring Program.

15. The compensatory habitat will be deemed to be functioning as intended if, in the opinion of DFO, the habitat is physically stable and riparian vegetation has achieved the targeted survival. Following the initial monitoring period, and any extensions thereof, DFO will assess the success of the compensatory habitat and determine whether or not it is functioning as intended, and choose the appropriate course of action as outlined below:

a) the compensatory habitat is functioning as intended and will be self-sustaining without further major remedial work. The Monitoring Program will be terminated; or

b) the compensatory habitat is not functioning as intended. GLOUCESTER shall extend the Monitoring Program, including remedial work, for an additional two years to allow more time for the habitat to become adequately established.

c) the compensatory habitat is not functioning as intended and further remedial work is not likely to rectify the situation. GLOUCESTER shall then carry out alternative compensatory works.

16. GLOUCESTER shall ensure that the compensatory habitat is functioning as intended for the lifetime of Gloucester Industrial Estates. If at any time GLOUCESTER becomes aware that the compensatory habitat is not functioning as intended GLOUCESTER shall carry out any works which are necessary to enable the compensatory habitat to function as designed. If GLOUCESTER transfers its interest in Gloucester Industrial Estates, and the transferee assumes the obligations in Paragraph 12 in a form satisfactory to DFO, GLOUCESTER shall thereafter be relieved of these obligations.

17. GLOUCESTER will provide a restrictive covenant in favour of BC Environment pursuant to s. 215 of the *Land Title Act*, to ensure the compensatory habitat is left undisturbed in perpetuity. The restrictive covenant will be attached as Schedule "C". GLOUCESTER confirms it shall leave the compensatory habitat undisturbed. After the compensatory habitat is functioning as intended, GLOUCESTER shall not carry on any work or undertaking that will adversely disturb or impact the compensatory habitat, and will take all reasonable steps to ensure that the compensatory habitat is not disturbed by others, so long as GLOUCESTER is associated with Gloucester Industrial Estates.

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18. GLOUCESTER shall forthwith deliver to DFO a performance bond or a letter of credit from a Canadian bank in the sum of [redacted] and valid until February 2002, which shall be in a form approved by DFO.

The holder of this authorization is hereby authorized under the authority of section 35(2) of the Fisheries Act, R.S.C., 1985, c. F. 14, to carry out the work or undertaking described herein.

This authorization is valid only with respect to fish habitat and for no other purposes. It does not purport to release the applicant from any obligation to obtain permission from or to comply with the requirements of any other regulatory agencies.

Failure to comply with any condition of this authorization may result in charges under the Fisheries Act.

This authorization form should be held on site and work crews should be made familiar with the conditions attached.

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s.20(1)(b)

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Date of issuance: September 15, 1997

Approved by: _____
Dale Paterson

Title: Area Chief, Fraser River Division Habitat Unit
Habitat and Enhancement Branch

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s.19(1)

161884 Canada Inc. acknowledges that DFO has consulted with it regarding the terms of this Authorization, and confirms that it has reviewed and understands the terms of this Authorization, and it will comply with them.

Executed by an authorized signatory of 161884 Canada Inc. on the 15 day of September, 1997 in the presence of:

_____
(print name)

161884 Canada Inc.

Per: _____

Name

Title

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Fisheries and Oceans / Pêches et Océans

DFO File No.: CANALS AT GLOUCESTER
Referral File No.: 97-HPAC-PA2-023-000034
Authorization No. / No de l'autorization

AUTHORIZATION FOR WORKS OR UNDERTAKINGS AFFECTING FISH HABITAT

Authorization issued to:

Name: 161884 Canada Inc. (Gloucester Industrial Estates)

Address: 5525 272 Street Aldergrove, B.C. V0X 1A0

Telephone No.: (604) 856-3156

Location of Project

The harmful alteration of fish habitat will occur on Canal #3 and Canal #4 north and south of Gloucester Way in Gloucester Estates, Langley B.C..

Valid Authorization Period

The valid authorization period for the harmful alteration of fish habitat associated with the channel relocations is September 12 to September 30, 1997.

Description of Works or Undertakings

Details of these works are shown in Aplin and Martin Consultants Ltd. Project No. 96025-14 drawing Revision 4 dated May 1997 (Appendix 1) and ECL Envirowest Consultants Ltd. drawings 467-04-01, March 1997, (Appendix 2) 467-04-02, August 18, 1997, (Appendix 3) and 467-04-03, May 1997, (Appendix 4), and in the habitat balance sheet prepared by ECL Envirowest Consultants Ltd. (Appendix 5).

The harmful alteration of fish habitat hereby authorized involves the relocation of 592 m^2 of rearing habitat and the associated 10001 m^2 riparian habitat:

1. the diversion of stream flow from Canal #3 south of Glouceser Way to Canal #2 south of Gloucester Way and the infilling of the portion of Canal #3 south of Gloucester Way. This will result in the loss of 64.0 m^2 rearing habitat, and 2812 m^2 riparian habitat.

2. the relocation of Canal #4, south of Gloucester Way to a location 30 m east of the present location. This will result in the loss of 193 m^2 rearing and 2853 m^2 riparian habitat.

3. the relocation of the eastern watercourse (Canal #4), north of Gloucester Way to a location 30 m east of the present location. This will result in the loss of 126 m^2 rearing habitat and 912 m^2 riparian habitat.

4. the relocation of the western watercourse (Canal #3), north of Gloucester Way to a position west of the present location, parallel to 268th Street. This will result in the loss of 146 m^2 rearing habitat and 3424 m^2 riparian habitat. There will be one 12.0 m long 1630 x 1120 mm CSP pipe arch culvert and one 10.0 m long 1630 x 1120 mm CSP pipe arch culvert installed in the new channel, as per Appendix 1, for road crossings.

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Conditions of Authorization

1. Gloucester Industrial Estates confirms that all plans and specifications relating to this Authorization have been duly prepared and reviewed by appropriate professionals working on behalf of Gloucester Industrial Estates. Gloucester Industrial Estates acknowledges that it is solely responsible for all design, safety and workmanship aspects of all of the works associated with this Authorization.

Conditions that relate to the road construction and creek crossing:

2. All instream work must be conducted during the Fisheries Instream Work Window between August 01 and September 30, 1997.

3. All work must be carried out during favourable weather and low water conditions. Upon commencement of the project, the work must be pursued to completion as quickly as possible.

4. All machinery must be clean and in good working condition and no fuels, lubricants or construction wastes are to enter the watercourse.

5. The standards for sediment and erosion control outlined in the jointly published BC Environment / Fisheries and Oceans "Land Development Guidelines for the Protection of Aquatic Habitat" must be adhered to. All work must be conducted in such a manner as to prevent sediment or sediment laden water from entering the watercourse.

6. All work must be undertaken and completed in such a manner so as to prevent the release of raw concrete, concrete leachate or other deleterious substances into any ditch, watercourse, ravine or storm sewer system.

7. Machinery is to work from the stream bank and not in the stream channel. Machinery is not permitted to cross the wetted creek channel.

8. Streamside vegetation shall be disturbed as little as possible. Any vegetation destroyed or damaged as a result of the works must be replaced as per the BC Environment planting guidelines.

9. All excavated material and debris must be removed from the site, or placed in a stable area above the high water mark of the stream as far as possible from the channel, and protected from erosion by planting. Material which is moved off site must be disposed of in such a manner as to prevent its entry into any watercourse, floodplain, ravine, or storm sewer.

10. All instream work must be undertaken and completed in isolation of all flowing water. Generally, this is accomplished by temporarily diverting, enclosing or pumping the water around the work site. Flow to the downstream portions of the stream must not be cut off at any time during construction. In addition, the point of discharge to the creek must be located immediately downstream of the work site. The new channel construction should be completed outside the active stream channel and prior to the diversion of the creek into the new structure. While diverting the creek into the new channel, flow to the downstream portions of the stream must not be cut off at any time.

11. A qualified environmental consultant must be retained to undertake a fish salvage prior to the commencement of the works. The environmental consultant must contact this office prior to undertaking the salvage and must obtain all the necessary permits required by fisheries regulations. A report summarizing the fish catch results must be forwarded to this office and to BC Environment Fisheries Section within 60 days.

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12. An environmental monitor must be present during all instream works. This monitor must have the authority to alter or halt works should they believe the works may be detrimental to aquatic life.

Conditions that relate to compensatory habitat:

13. The compensatory work which pertains to the harmful alteration of fish habitat associated with the channel relocations involves the creation of 994 m^2 of rearing habitat and the planting of 13,674 m^2 of the riparian area around the new channels. The compensatory work is shown in Appenices 2, 3 and 4 and outlined in Appendix 5, and is as follows:

a) a 335.0 m^2 channel will be constructed at the upstream end of Canal #2 and a 2555.0 m^2 riparian area will be planted around the new channel.

b) a 187 m^2 rearing channel will be constructed 30 m east of the present Canal #4 on the south side of Gloucester Way and a 4983 m^2 riparian area will be planted around the new channel.

c) a 160 m^2 channel will be created 30 m east of the present Canal #4 on the north side of Gloucester Way and a 2080 m^2 riparian area will be planted around the new channel.

d) a 312 m^2 rearing channel will be created along the east side of 268th Street, which will connect to a cannal which flows from the confluence of Canals 1 and 2, and a 4056 m^2 riparian area will be planted around the new channel.

14. The compensatory works described above shall be commenced on or before September 12, 1997 and shall be completed on or before October 31, 1997. All instream work must be completed during the Fisheries Instream Work Window August 01 to September 30, 1997.

15. Gloucester Industrial Estates shall carry out a monitoring program (the "Monitoring Program") for a period of three years, (1998,1999, and 2000) which includes the following:

a) a date-stamped photographic assessment of the work and compensation showing before, during and after conditions of the worksites within 60 days of the completion of the project.

b) an assessment of physical stability should be undertaken quarterly which includes looking for any evidence of erosion, slumping, tension cracks, movement of instream structures, bed material changes, debris accumulation and sediment transport changes.

c) an annual assessment of the vegetation in and around the compensatory habitat, noting survival rates of the planted vegetation. Plant survival must meet or exceed 80% for shrubs and 100% for trees. Should this survivorship not be achieved, additional planting is required to be undertaken during the next planting season.

d) an annual fish assessment in the newly constructed channels during the spring when salmonid juveniles are present to confirm fish passage using baited minnow traps or seine nets.

e) the monitoring program must be conducted by a qualified biologist, or other professional who has experience in this area, and who is acceptable to DFO; and,

f) the provision to DFO of the annual results of the Monitoring Program in a written report by the first of November of each year of the Monitoring Program.

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16. The compensatory habitat will be deemed to be functioning as intended if, in the opinion of DFO, the habitat is physically stable, the target survival rate for trees and shrubs is attained, and salmonids are able to access and utilize the new rearing habitat. Following the initial monitoring period, and any extensions thereof, DFO will assess the success of the compensatory habitat and determine whether or not it is functioning as intended, and choose the appropriate course of action as outlined below:

a) the compensatory habitat is functioning as intended and will be self-sustaining without further major remedial work. The Monitoring Program will be terminated; or

b) the compensatory habitat is not functioning as intended. Gloucester Industrial Estates shall extend the Monitoring Program, including remedial work, for an additional two years to allow more time for the habitat to become adequately established.

c) the compensatory habitat is not functioning as intended and further remedial work is not likely to rectify the situation. Gloucester Industrial Estates shall then carry out alternative compensatory works.

17. Gloucester Industrial Estates shall ensure that the compensatory habitat is functioning as intended for the lifetime of Gloucester Industrial Estates. If at any time Gloucester Industrial Estates becomes aware that the compensatory habitat is not functioning as intended, for example by reason of natural erosion or being covered by large amounts of sediment or the deterioration of structures, Gloucester Industrial Estates shall carry out any works which are necessary to enable the compensatory habitat to function as designed.

18. To guarantee the performance of its agreements, DFO must receive, from Gloucester Industrial Estates, a performance bond or irrevocable letter of credit from a Canadian bank in the sum of [redacted] the estimated cost of the proposed compensatory works and monitoring. The compensatory works and monitoring results will be reviewed annually by DFO to ensure that they are functioning properly. Should the compensatory works not be functioning as intended, DFO may draw upon the bond or letter of credit to perform any works deemed necessary. The tenure of the bond or letter of credit shall be until September 30, 2002. DFO may, by written confirmation, release portions of the bond or letter of credit, upon written request, where DFO views that certain aspects of the compensatory works are complete and physically stable.

s.20(1)(b)

The holder of this authorization is hereby authorized under the authority of section 35(2) of the Fisheries Act, R.S.C., 1985, c. F. 14, to carry out the work or undertaking described herein.

This authorization is valid only with respect to fish habitat and for no other purposes. It does not purport to release the applicant from any obligation to obtain permission from or to comply with the requirements of any other regulatory agencies.

Failure to comply with any condition of this authorization may result in charges under the Fisheries Act.

This authorization form should be held on site and work crews should be made familiar with the conditions attached.

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Date of issuance: September 18, 1997

Approved by: Dale Paterson

Dale Paterson

Title: Area Chief, Fraser River Division Habitat Unit
Habitat and Enhancement Branch

Gloucester Industrial Estates acknowledges that DFO has consulted with it regarding the terms of this Authorization, and confirms that it has reviewed and understands the terms of this Authorization, and it will comply with them.

Executed by an authorized signatory of Gloucester Industrial Estates on the 15 day of September, 1997 in the presence of:

[redacted]

(print name)

Gloucester Industrial Estates

Per: [redacted]

Name

Title

s.19(1)

Canada

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AMENDMENT

To

DFO Authorization No: 99-HPAC-PA2-000-000217
BCE File No. A2004880

AUTHORIZATION FOR WORKS OR UNDERTAKINGS AFFECTING FISH HABITAT

s.19(1)

Authorization Amendment issued to:

Name: BC Hydro and Power Authority

Address: 6911 Southpoint Drive (E05), Burnaby, B.C., V3N 4X8

Contact: [redacted] BC Hydro/ [redacted] Gloucester Industrial Estates

Telephone No: (604) 528-2103 / (604) 856-3156

Location of Project:

Within Gloucester Industrial Estates in the Township of Langley, adjacent to the new BC Hydro Gloucester Estates Substation near 272nd Street and 60th Avenue.

Valid Authorization Period:

The valid authorization period for the harmful alteration associated with the works is from **December 1, 2001** to **September 30, 2005**.

Amended Conditions of Authorization:

Amended Conditions that relate to compensatory/mitigatory habitat:

Condition 13

All leavestrip areas shown on ECL Drawing No. 467-02-12 will be protected by a Restrictive Covenant to be registered against the title of the propert(ies) affected under Section 219 of the Land Titles Act, as per the requirements of M WLAP. All leavestrips are to be left in a totally undisturbed, naturally vegetated state in perpetuity. The covenant boundary must be surveyed by a registered BC Land Surveyor and a permanent fence must be constructed at the covenant boundary between development areas and the covenant areas prior to the commencement of any site development, unless otherwise agreed to by M WLAP.

BC Hydro will construct a single permanent fence between the Restrictive Covenant and the BC Hydro property. This fencing may be incorporated into the perimeter security fencing around the substation. BC Hydro will also provide survey information from registered BC Land Surveyor marking the border of the BC Hydro property and the Restrictive Covenant (west side).

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Gloucester Industrial Estates shall supply and install permanent fence along the east side of the 30 meter reserve and register the Restrictive Covenant with MWLAP.

s.19(1)

Modification to Condition 13

The above condition 13 is hereby modified to permit BC Hydro to complete tree removal works within the Restrictive Covenant area, as per the letter from BC Hydro to Fisheries and Oceans Canada [redacted] *to Thorpe)*, dated 7 August 2001 (attached to the Authorization Amendment as Appendix 1). BC Hydro will provide replacement trees and riparian shrub planting for the purposes of augmenting the existing riparian vegetation of the adjacent fish and wildlife enhancement area, as well as screening the substation within the 3.5m buffer. An assessment of the riparian vegetation will be conducted after a period of one year (2004) after installation and again after three years (2006). Plant survival must be at least 80% for ground cover and shrubs and 100% for trees for the duration of the monitoring program . All new plant materials must be appropriately marked or flagged for identification purposes. The Monitoring Program shall be conducted by a qualified monitor *.

The above condition 13 is also hereby modified to permit BC Hydro to complete vegetati on maintenance works adjacent to the access road and substation on their property for the sole purpose of ensuring the safety of staff and substation/ plant operations, specifically including the pruning of tree branches and/ or the removal of hazard trees. All maintenance activities undertaken by BC Hydro shall be completed in accordance with the draft MOU between DFO and BC Hydro, entitled "Approved Work Practices for Managing Riparian Vegetation". If or when the MOU is endorsed, the MOU shall provide the terms and conditions for riparian vegetation maintenance within the Restrictive Covenant area that may be undertaken by BC Hydro and its crews or contractors.

** A qualified monitor may be a registered biologist or other environmental professional who has previous training, experience, or expertise in the required activit(ies). To determine acceptability DFO and/ or MWLAP may request resume or interview. DFO and/ or MWLAP have the right to refuse the services of an environmental monitor if they do not possess the qualifications suitable for the intended works.*

Conditions of the Authorization Amendment:

BC Hydro shall ensure that the terms and conditions of the original Fisheries and Oceans Canada Authorization 99-HPAC-PA2-000-000217 (Gloucester Industrial Estates) which directly apply to BC Hydro work are complied with.

In the event of the fragmentation or privatization of BC Hydro, the terms and conditions of the Authorization will become the responsibility of the owner of the substation and associated property.

The terms and conditions of the Authorization Amendment withstanding, Fisheries and Oceans Canada (DFO) may at any time and at their sole discretion acting reasonably, direct the BC Hydro, and their consultants, to suspend or alter works and activities associated with the vegetation removal and future maintenance. Further, DFO may at any time and at their sole discretion acting reasonably, direct the BC Hydro, and their consultants, to carry out at their own expense any works or activities deemed necessary by DFO to avoid or mitigate adverse impacts to fish habitat.

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Amendment to Authorization 99-HPAC-PA2-000-000217

The holder of this Authorization Amendment is hereby Authorized under the authority of section 35(2) of the Fisheries Act, R.S.C., 1985, c. F. 14, to carry out the work or undertaking described herein.

This Authorization Amendment is valid only with respect to fish habitat and for no other purposes. It does not purport to release the applicant from any obligation to obtain permission from or to comply with the requirements of any other regulatory agencies.

Failure to comply with any condition of this Authorization Amendment may result in charges under the Fisheries Act.

Date of issuance:

Approved by: Matt Foy.
Dale Paterson

Title: Area Chief, Lower Fraser River Division Habitat Unit
Habitat and Enhancement Branch
Lower Fraser
Fisheries and Oceans Canada

---

s.19(1)

BC Hydro and Gloucester Industrial Estates acknowledge that DFO has consulted with them regarding the terms of this Authorization Amendment, and confirms that they have reviewed and understand the terms of this Authorization Amendment, and they will comply with them.

Executed by an Authorized signatory of BC Hydro on the 4 day of July, ~~2000~~ 2007 in the presence of:

[redacted]
Witness (Signature)

[redacted]
Name (Print)

[redacted]
Title (Print)

BC Hydro

Per: [redacted]

Name

Title

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Amendment to Authorization 99-HPAC-PA2-000-000217

s.19(1)

Executed by an Authorized signatory of Gloucester Industrial Estates on the day of June 19, ~~2000~~ 2002 in the presence of:

[redacted]

Gloucester Industrial Estates

Per: [redacted]
Authorized signatory

Name (Print)

Title (Print)

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s.19(1)

Appendix 1 - Letter from BC Hydro to Fisheries and Oceans Canada (*[redacted] to Thorpe)*, dated 7 August 2001

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BC hydro

THE POWER IS YOURS

[redacted]
Phone: [redacted]
Fax: 528-2940
E-mail: [redacted]

s.19(1)

7 August 2001

Suzanne Thorpe, Habitat Biologist
FISHERIES AND OCEANS CANADA
Land Use Section
100-Annacis Parkway, Unit 3
Delta, British Columbia
Canada, V3M 6A2

Dear Ms. Thorpe:

To follow up on our meeting of 11 June 2001, the following provides you with a description of tree removals on the proposed BCHydro Gloucester Estates Substation site and adjacent future restrictive covenant area. As you are aware, the stream habitat restoration work of the adjacent property is currently being undertaken by Progressive for Gloucester Estates under the direction of Envirowest. On 10 July BCHydro's professional forest engineer and environmental coordinator met with Ian White of Envirowest to discuss the proposed works and identify tree removals.

All trees that pose an imminent threat to worker safety and the security of BCHydro's proposed access road and substation require removal and/or pruning. Trees more than 2 m into the RC zone have been identified on site with a blue dot (removal) or blue circle (wildlife tree). BCHydro proposes to undertake this work this fall as part of the site preparation.

As shown by the approximate quantities in Table 1, BCHydro requires the removal and/or pruning of 35 trees within the future restrictive covenant. The majority of these trees reside within 2 meters east of the property line that would be affected by road construction. Another 49 trees shall be removed within the BCHydro property to accommodate the access road and substation (Table 2).

Future maintenance of trees around substation

BCHydro does not anticipate maintenance of trees within the 30m buffer in the next 20 years with the exception of pruning of branches from cottonwoods or alders should they fall. This request includes the revision of the Gloucester Estates DFO Authorization to include future pruning and removal of hazard trees and branches should they be deemed to threaten the security of our plant.

Site restoration and landscaping

BCHydro plans to provide replacement trees and riparian shrub planting as per Table 3 for the purposes of augmenting the existing riparian vegetation of the adjacent fish/wildlife enhancement area and screening the substation within the 3.5m buffer. The former is

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subject to approval by the property owner to undertake planting within the proposed covenant area.

Please call me if you require any further information prior to making amendments to the original Gloucester Estates authorization or if you wish to meet on site and review any of the proposed removals.

Sincerely,

[redacted]

cc. [redacted] BCHydro [redacted]
[redacted] BCHydro [redacted]
[redacted] Gloucester Estates
John Summers, Ministry of Water, Land, Air Protection

s.19(1)

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Table 1. Removal of Trees located within the proposed restrictive covenant

No.	Trees within 2 from property line	No.	Trees outside 2 meters from property line
2	Alder <30 cm dbh	2	Alder <30 cm dbh
1	Alder 30-60 cm dbh	5	Alder 30-60 cm dbh
0	Alder >60 cm dbh	0	Alder >60 cm dbh
16	Cottonwood <30 cm dbh	1	Cottonwood <30 cm dbh
5	Cottonwood 30-60 cm dbh	0	Cottonwood 30-60 cm dbh
1	Cottonwood >60 cm dbh	1	Cottonwood >60 cm dbh
1	Cascara <30 cm dbh		

Table 2. Removal of trees on BCHydro property to accommodate the access road and proposed substation

No.	Trees within BCHydro property
0	Alder <30 cm dbh
1	Alder 30-60 cm dbh
1	Alder >60 cm dbh
42	Cottonwood <30 cm dbh
4	Cottonwood 30-60 cm dbh
0	Cottonwood >60 cm dbh
1	Birch 30-60 cm dbh

Table 3. Proposed planting

No.	Botanical Name	Common Name	Planted Size	Comments
15	Thuja plicata	Western red cedar	2.0m ht.	
5	Holodiscus discolor	Ocean spray	#5 pot	
10	Polystichum munitum	Sword fern	#2 pot	
5	Mahonia aquifolium	Oregon grape	#2 pot	
5	Philadelphus lewisii	Mock orange	#5 pot	
5	Corylus cornuta var. californica	Beaked hazelnut	#5 pot	
10	Cornus sericea 'alba elegantissima'	Silverleaf dogwood shrub	#5 pot	
10	Cornus sericea	Redtwig dogwood shrub	#5 pot	
5	Rubus spectabilis	Salmonberry	#2 pot	
5	Sambucus racemosa var. arborescens	Red Elderberry	#5 pot	
130	Thuja occidentialis 'Brandon'	Pyramidal Cedar hedge	2.0m ht.	Planted on west and north sides of station at 45cm on centre
8	Acer circinatum	Vine maple	2.5m ht.	

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5525 - 272nd Street
Langley, BC V4W 1P1
Phone: 604-856-3156
Fax: 604-856-3384

Gloucester Industrial Estates

s.19(1)

To: Suzanne Thorpe A/Head Land Use Section From: [redacted]

Of: DFO Date: Oct. 14/03

Fax: (604) -666-6627 Pages To Follow: 1

Re: CC: [redacted]

☐ Urgent ☑ For Review ☐ Please Comment ☐ Please Reply ☐ Please Recycle

Hi Suzanne,

Notes: We spoke (quite some time ago - sorry!) about the release of a letter of credit (copy attached). Do you have any documentation confirming that DFO no longer requires this. Please forward a copy to this office if you have a release or some confirmation letter. If not, please let me know. Thank you.

Yours truly,

[redacted]

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is withheld pursuant to section

est retenue en vertu de l'article

20(1)(b)

of the Access to Information Act

de la Loi sur l'accès à l'information

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HABITAT & ENHANCEMENT BRANCH
AUG - 9 2004
LOWER FRASER AREA

AMENDMENT

to

DFO AUTHORIZATION NO: 99-HPAC-PA2-000-000217

AUTHORIZATION FOR WORKS OR UNDERTAKINGS AFFECTING FISH HABITAT

Authorization Amendment issued to:

Name: 161884 Canada Inc.: Gloucester Industrial Estates (herein also referred to as 'Gloucester')

s.19(1)

Address: 310 – 1001 West Broadway
Vancouver, B.C.
VV6H 4B1

Contact: [redacted]

Telephone No.: 604 856-3156
Facsimile No.: 604 856-3384

Location of Project:

Tributaries to West and Nathan Creeks within Gloucester Industrial Estates in Langley, generally encompassing lands north of the Trans-Canada Highway, west of the Langley-Abbotsford boundary, east of 264th and south of 60th Avenue.

Amended Valid Authorization Period:

The valid authorization period for the harmful alteration associated with the works to be extended to **September 30, 2008**.

Amended Conditions of Authorization:

1. Under Authorization 99-HPAC-PA2-000-000217 the detention area located on the east side of 272 Street south of 64th Avenue was also slated for development of a golf course; golf course detention facilities configuration details were to be worked out with the developer for the site. However, due to lack of interest in its development as a golf course, Gloucester has requested planning revision to Langley's OCP to remove the required golf course from the accepted plans. Since detention is imminently required with continued development of lands outside of the golf course area, Gloucester proposes

AUG 0 5 2004

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construction of an 'Interim Detention Pond' in 2004, between 1 August 2004 and 30 September 2004.

2. The 'Interim Detention Pond' will be constructed as shown on Aplin and Martin Design Drawing Nos. 24066-01 through -06, including:
    a. The construction of a permanent berm;
    b. The construction of a flow control structure within the hydraulic channel of West Creek at the berm crossing of the creek;
    c. The excavation of lands on either side of the creek and landward of the 15m no disturbance zone;
    d. Removal to two (2) existing sediment ponds and construction of a temporary storm water drainage ditch; and,
    e. Riparian planting along the berm slope and hydro-seeding of all disturbed areas.
3. The amended conditions of Authorization shall be consistent with the application for amendment submitted to DFO from ECL Envirowest Environmental Consultants, dated 19 July 2004, entitled "Gloucester Industrial Estates, Township of Langley".

All other conditions associated with Authorization Number 99-HPAC-PA2-000-000217 shall remain as per the original Authorization document, signed by 161884 Canada Inc., 24 August 2000 and by DFO on 29 August 2004.

The terms and conditions of the Authorization Amendment withstanding, Fisheries and Oceans Canada (DFO) may at any time and at their sole discretion acting reasonably direct, Gloucester and their consultant, agents or contractors, to suspend or alter works and activities associated with this project.

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The holder of this Authorization Amendment is hereby authorized under the authority of section 35(2) of the Fisheries Act, R.S.C., 1985, c. F. 14, to carry out the work or undertaking described herein.

This Authorization Amendment is valid only with respect to fish habitat and for no other purposes. It does not purport to release the applicant from any obligation to obtain permission from or to comply with the requirements of any other regulatory agencies.

Failure to comply with any condition of this Authorization Amendment may result in charges under the Fisheries Act.

This Authorization Amendment should be attached to Authorization 99-HPAC-PA2-000-000217 and held on site and work crews should be made familiar with the conditions of this Authorization Amendment.

Date of issuance:

Approved by: _____
fw Dale Paterson

Title: Area Chief, Lower Fraser River Division Habitat Unit
Habitat and Enhancement Branch
Lower Fraser Area, Fisheries and Oceans Canada

---

s.19(1)

161884 Canada Inc.: Gloucester Industrial Estates acknowledges that DFO has consulted with them regarding the terms of this Authorization Amendment, and confirms that they have reviewed and understand the terms of this Authorization Amendment, and they will comply with them.

Executed by an authorized signatory of 161884 Canada Inc.: Gloucester Industrial Estates on the 6 day of August, 2004 in the presence of:

[redacted]

Title (Print)

161884 Canada Inc.: Gloucester Industrial Estates:

P[redacted]

N[redacted]

Title (Print)

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GLOUCESTER INDUSTRIAL ESTATES, LANGLEY, BC

CONSTRUCTION AND POST CONSTRUCTION HABITAT MONITORING (2005)

Fisheries and Oceans Canada
Habitat and Enhancement Branch
100 Annacis Parkway
Delta, BC V3M 6A2

February 2006

ECL ENVIROWEST CONSULTANTS LIMITED
Suite 130 - 3700 North Fraser Way
Burnaby, BC V5J 5J4
voice: 604-451-0505
facsimile: 604-451-0557
www.ecl-envirowest.bc.ca

HABITAT & ENHANCEMENT BRANCH
MAR . 8 2006
LOWER FRASER AREA

envirowest

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GLOUCESTER INDUSTRIAL ESTATES, LANGLEY, BC

CONSTRUCTION AND POST CONSTRUCTION HABITAT MONITORING (2005)

Fisheries and Oceans Canada
Habitat and Enhancement Branch
100 Annacis Parkway
Delta, BC V3M 6A2

February 2006

ECL ENVIROWEST CONSULTANTS LIMITED
Suite 130 - 3700 North Fraser Way
Burnaby, BC V5J 5J4
voice: 604-451-0505
facsimile: 604-451-0557
www.ecl-envirowest.bc.ca

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Report Citation: **ECL Envirowest Consultants Limited. 2006**. Gloucester Industrial Estates, Langley, BC - Construction and Post Construction Habitat Monitoring (2005). February 2006. *Report prepared for* Gloucester Industrial Estates, Langley, BC. 15 pages & attachments.

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February 20, 2006

Fisheries and Oceans Canada
Habitat and Enhancement Branch
s.19(1) Unit 3 - 100 Annacis Parkway
Delta, BC
V3M 6A2

DFO File No. 99-HPAC-PA2-000-000217

Attn.: Mr. Alan Jonsson

RE: GLOUCESTER INDUSTRIAL ESTATES, LANGLEY
Construction and Post Construction Habitat Monitoring (2005)

Please find enclosed the Construction and Post Construction Habitat Monitoring report associated with Gloucester Industrial Estates for the 2005 monitoring year. The report addresses Condition Nos. 19 and 32 (a) through (i) of the Subsection 35(2) federal Fisheries Act Authorization No. 99-HPAC-PA2-000-000217 for instream works and post construction monitoring, respectively. Section 2.0 comprises the environmental monitoring report for the removal of four beaver dams within the southwest quadrant of the estates, north of Gloucester Way. Section 3.0 comprises the fourth year of post construction monitoring of Habitat Areas A through E constructed during 1997, 2000, and 2001.

Gloucester Industrial Estates is in compliance with respect to reporting obligations associated with the above referenced Subsection 35(2) federal Fisheries Act Authorization.

Please contact me at 604-451-0505 or [redacted] if you have any comments [redacted] ents of the report.

[redacted] **JLTANTS LIMITED**

[redacted]

Copy: Mr. Mike Willcox [redacted]
Ministry of Water, Land and Air Protection
Gloucester Industrial Estates
ECL Envirowest Consultants Limited

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ATTACHMENT B: Gloucester Industrial Estates
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Photographs

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Habitat Areas A through E
Photographs

ATTACHMENT D: Gloucester Industrial Estates
Authorization Document

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1.0 INTRODUCTION

This report consists of environmental monitoring and post construction monitoring of constructed habitats associated with Gloucester Industrial Estates for the 2005 monitoring period. The report is comprised of two (2) components. Section 2.0 addresses Condition No. 19, and Section 3.0 addresses Condition No. 32 (a) through (i) of the Subsection 35(2) federal Fisheries Act Authorization No. 99-HPAC-PA2-000-000217 (Authorization) for instream works and post construction monitoring, respectively.

Section 2.0 comprises the environmental monitoring report for completion of deficiencies within the Gloucester Detention Ponds located east of 272 Street and south of 56 Avenue. Section 3.0 comprises the fourth year of post construction monitoring of mitigation, compensation, and stormwater treatment habitats constructed during 1997, 2000, and 2001 in association with development of Gloucester Industrial Estates. The locations of the habitats are identified in the Site Map (Figure 1; Attachment A). The water quality, fish sampling, and invertebrate sampling stations, and photograph locations associated with the post construction monitoring programs are identified in Figures 2 through 4 (Attachment A). Photograph documentation associated with the completion of deficiency works and post construction habitat monitoring are presented in Attachments B and C, respectively. The Authorization is included as Attachment D.

Gloucester Industrial Estates is in compliance with respect to reporting obligations associated with the Authorization.

2.0 GLOUCESTER INDUSTRIAL ESTATES YEAR 2005 INSTREAM WORKS ENVIRONMENTAL MONITORING REPORT

2.1 Project Overview

Instream works conducted during the 2005 fisheries work window (i.e. August 1 to September 15, 2005) consisted of completion of deficiencies within the Gloucester Detention Ponds (ponds) located east of 272 Street and south of 56 Avenue. Deficiencies included completion of the channel at the eastern extent of the ponds, interior mechanical adjustments and grouting of all joints within the control structure at the outlet of the ponds, removal of the existing sandbag dams (i.e. four dams) located within the detention ponds, and hydroseeding all exposed surfaces of the detention ponds basin and slopes.

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2.2 Project Reference Summary

- Project Location: Northeast quadrant of Gloucester Industrial Estates east of 272 Street south of 56 Avenue.

s.19(1)

- Project Description: Completion of deficiencies
- Environmental Monitor: ECL Envirowest Consultants Limited
- Contractor: Tyam Construction Ltd.
- Approval Documents: B.C. Environment, Lands and Parks Water License No. A2004880, dated September 8, 2000; and, Department of Fisheries and Oceans Authorization No. 99-HPAC-PA2-000-000217, dated August 29, 2000.

2.3 Construction and Impact Mitigation

Completion of the channel at the eastern extent of the ponds was undertaken in the dry (i.e. no running water or precipitation). The channel was connected to a previously constructed channel by removing approximately 10 linear metres of soil, installing erosion control matting throughout the channel and banks, and seeding the exposed surface areas.

The control structure (structure) at the outlet of the ponds required interior mechanical adjustments and grouting of all joints within the structure. Work proceeded following isolation of the work area. A seine net and sandbag dam were installed at the upstream extent of the work area and metal plates were installed at the downstream extent of the work area. A six inch pump (complete with fish screen) was utilized to convey upstream flows past the work area into the pond immediately downstream of the control structure. A lifeform salvage was conducted within the isolated area prior to commencement of work. Northwestern salamanders (*Ambystoma gracile*) and threespine stickleback (*Gasterosteus aculeatus*) were captured and relocated downstream. Bypass pumping was maintained on a continuous basis from commencement to completion of construction activities. Accumulated water within the structure was periodically pumped to low dry areas within the west pond. Discharged water from within the structure was treated with carbon dioxide and/or allowed to dissipate into existing substrates within the dry pond. Grouted surfaces were permitted to cure prior to conveying upstream flows through the structure; this process was undertaken to ensure measured pH was within the range required to protect freshwater aquatic life[1].

[1] **Nagpal, N. K., L.W. Pommen and L.G. Swain. 1998; Updated August 1999.** British Columbia Approved Water Quality Guidelines (Criteria). Water Management Branch, Environment and Resource Department, Ministry of Environment, Lands and Parks. 66 pp.

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Additional rip rap and erosion control fabric was installed on the surfaces adjacent to the structure and at the berm overflow located immediately west of the control structure. The existing sandbag dams within the ponds were removed and all disturbed and poorly vegetated surfaces were hydroseeded.

Beaver dams continue to be a problem throughout the watercourses at Gloucester Industrial Estates. Physical removal of beaver dams will be required during the 2006 fisheries work window to ensure the storm water management plan for the southwest quadrant of the estates is not compromised.

2.4 Discussion

Instream works conducted by Gloucester Industrial Estates during the 2005 fisheries work window included completion of deficiencies east of 272 Street and south of 56 Avenue. Envirowest monitored the instream works on a full time basis or as required to ensure impacts to fish habitat did not occur. Photograph documentation of the works is provided in Attachment B.

All activities associated with the above described works were completed without impacts to fish or wildlife habitat and in accordance with the requirements of the *Land Development Guidelines for the Protection of Aquatic Habitat*[2], the approval documents listed in the Project Reference Summary and at the direction of the environmental monitor.

3.0 2005 POST CONSTRUCTION HABITAT MONITORING PROGRAM – HABITAT AREAS A, B, C, D & E

The following section summarizes the results of the 2005 post construction monitoring of mitigation/compensation and stormwater treatment habitats constructed in association with development of Gloucester Industrial Estates. This section of the report addresses Condition No. 32 (a) through (i) of the Authorization provided for development of Gloucester Industrial Estates. The 2005 monitoring year is the fourth year of five (5) years of post construction monitoring for the referenced habitats.

3.1 Introduction

As per requirements outlined in the Authorization, the monitoring program included assessments of channel stability, riparian vegetation, water quality (i.e. dissolved oxygen, pH, and temperature), channel flow velocity, and fish utilization. Invertebrate sampling is not required as part of the monitoring program again until the final year (year 5) of the monitoring program. Water quality measurements, fish sampling, assessment of physical stability, and flow velocity

[2] **Chilibeck, B.G., G. Chislett, and G. Norris. 1993.** Land Development Guidelines for the Protection of Aquatic Habitat. Department of Fisheries and Oceans and the Ministry of Environment, Lands and Parks. Vancouver/Victoria. 108 pp.+ appendices.

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measurements were conducted on June 28, 2005 and November 30, 2005. The general locations of the constructed habitats and the approximate locations of the water quality, fish, and previous invertebrate sampling stations are identified in Figures 1 through 4 (Attachment A). Assessment methodology and results are presented in Sections 3.2 and 3.3, respectively.

3.2 Methodology

3.2.1 Physical Stability

Physical stability of the constructed habitats was visually assessed throughout the monitoring period during each site visit. Photographs depicting the constructed habitats are included in Attachment C.

3.2.2 Riparian Vegetation

The quantitative assessment of riparian shrubs and wetland plants within Habitat Areas A, B, C, D, and E has been completed; although a qualitative assessment including visual observations of riparian shrub densities, plant species recruitment, wetland plant colonization, and the health/vigor of the riparian community is undertaken during each site visit.

3.2.3 Water Quality

In situ water quality analyses included measurements of pH, dissolved oxygen, and temperature. Water quality was analyzed using YSI 55 (dissolved oxygen, temperature), and Oakton pH Testr10 meters. The YSI 55 and pH Testr10 meters were calibrated prior to sampling in accordance with the manufacturer's recommended methods. The approximate locations of the water quality stations are identified in Figures 2 through 4 (Attachment A).

3.2.4 Channel Flow Velocity

Measurements of channel flow velocity within reconstructed channel habitats were conducted using a Gurley 622 current meter. The current meter is factory calibrated and does not require calibration prior to use. The meter was positioned in the centerline of the reconstructed channels at a depth of approximately 60 percent of the total depth of water within the channel.

3.2.5 Fish Utilization

Fish sampling was conducted using gee-type minnow traps baited with salmon roe. Traps were set and soaked for approximately 24 hours to assess fish utilization of the constructed habitats. The locations of the fish sampling stations are identified in Figures 2 through 4 (Attachment A).

3.2.6 Invertebrate Sampling

Invertebrate sampling was not a requirement during this sampling year.

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3.3 Results and Discussion

The following summaries present results of the data collected during the 2005 monitoring period. Photo documentation of the constructed habitats is provided in Attachment C.

3.3.1 Habitat Area A

3.3.1.1 Physical Stability

Visual assessments of channel stability revealed that the channel is stable with no evidence of erosion, slumping, or tension cracks. Instream structures are stable with no evidence of movement or debris accumulation; although a large beaver dam has been constructed at the mid point of the channel between Higway No. 1 and Gloucester Way (i.e. north south alignment).

3.3.1.2 Riparian Vegetation

Vegetation throughout the site appears vigorous and well established; although vegetation is being foraged by beaver. Himalayan blackberry (*Rubus discolor*) is sporadically establishing along the channel banks.

3.3.1.3 Water Quality

Results from the water quality assessments at stations WQ-A1 through WQ-A4 are summarized in Table 3.1 below. Dissolved oxygen concentrations during the monitoring period ranged from a minimum of 1.48 milligrams per litre (mg/L) to a maximum of 11.92 mg/L. The dissolved oxygen concentrations during the June sampling period were below levels at which salmonids show initial distress symptoms (i.e. 6.0 mg/L)[3]. The flow in the channel during the June visit was nominal. Measured pH was within the range required to protect freshwater aquatic life[4] and ranged from a minimum of 6.8 to a maximum of 7.6 during the June visit. Measured pH was not recorded during the November visit due to a faulty meter. Temperature ranged from a minimum of 3.2 degrees Celsius (°C) to a maximum of 14.7°C, below lethal levels for salmonids (i.e. 20°C)[2].

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[3] **MacDonald, L.H., A.W. Smart and R.C. Wissmar. 1991.** Monitoring Guidelines to Evaluate Effects of Forestry Activities on Streams in the Pacific Northwest and Alaska. USEPA. 166 pp.

[4] **Ministry of Water, Land, and Air protection. 1998.** British Columbia Approved Water Quality Guidelines (Criteria). Updated August 24, 2001.

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Table 3.1 Water Quality Sampling Results – Habitat Area A					
Sample Year, Date and Station			pH	Temp.[a] (°C)	DO[b] (mg/L)
Year 4	June 28, 2005	WQ-A1	7.6	14.2	5.15
		WQ-A2	7.4	14.3	2.13
		WQ-A3	6.8	14.7	1.48
		WQ-A4	6.8	14.4	3.10
	November 30, 2005	WQ-A1	*	3.2	11.92
		WQ-A2	*	3.2	10.70
		WQ-A3	*	3.3	11.60
		WQ-A4	*	3.5	12.60

[a] temperature
[b] dissolved oxygen
* pH meter malfunctioning during visit

3.3.1.4 Channel Flow Velocity

Channel flow velocity was measured at the approximate middle section of the realigned hydraulic channel. The measured channel flow velocity on November 30, 2005 was 0.239 metres per second (m/s). Table 3.2 below summarizes the measured flow velocities for Habitat Area A for the 2005 monitoring period.

Table 3.2 Channel Flow Velocities – Habitat Area A		
Monitoring Year	Date	Velocity (m/s)
Year 4	June 28, 2005	*
	November 30, 2005	0.239

* insufficient water depth for measurement

3.3.1.5 Fish Utilization

Threespine stickleback and northwestern salamander were captured during minnow trapping. Threespine stickleback mortalities were evident during the June 28, 2005 sampling period. Locations of fish sampling stations are identified in Figure 2. Table 3.3 below summarizes the results of fish sampling for the 2005 monitoring period.

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Table 3.3 Fish Sampling Results – Fish Habitat Area A			
Station	Fish Species[a]	Sample Year and Date	
		Year 4 (2005)	
		June 28, 2005	November 30, 2005
FSS-A1	TSB	40	15
	NWS	5 (neotenic)	-
FSS-A2	TSB	20	5
FSS-A3	TSB	25	10
FSS-A4	TSB	15	13
FSS-A5	TSB	35	25
	NWS	3 (neotenic)	-
FSS-A6	TSB	3	15

[a] species codes TSB threespine stickleback (*Gasterosteus aculeatus*)
NWS northwestern salamander (*Ambystoma gracile*)

3.3.1.6 Invertebrate Sampling

Invertebrate sampling was not a requirement during this monitoring period.

3.3.2 Habitat Area B

3.3.2.1 Physical Stability

Visual assessments of pond stability and the pond inlet channels revealed that slumping in previously identified areas[5] remain stable. There was no evidence of further slumping in Habitat Area B. Access roads adjacent to the pond habitat are being impacted by off-road vehicles. The vegetation adjacent to the watercourse and pond appear to have stabilized the substrates along the perimeter of the pond. Instream structures (e.g. large woody debris) are stable and display no evidence of movement. Other than the beaver activities (e.g. dams), debris accumulation was not observed.

Evidence of beaver activity within Habitat Area B was observed. A beaver dam was observed within the channel located in the northwest portion of Habitat Area B. Dams are reconstructed in Habitat Area B on a regular basis and will require removal during future fisheries work windows.

3.3.2.2 Riparian Vegetation

s.19(1) Riparian and wetland vegetation has become well established in all areas of Habitat Area B. The wetted edge of the watercourse and pond including the wetland islands are densely vegetated.

[5] [redacted] **February 2003.** Gloucester Industrial Estates, Langley, B.C.: Construction and Post Construction Habitat Monitoring (2002). *Prepared for* Gloucester Industrial Estates, Langley, B.C. 23 pages & attachments

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The upland tree and shrub assemblage is displaying a dense and vigorous growth habit. Installed and volunteer plant material continues to reflect a strong riparian assemblage within the boundary of the channel and pond habitats of Habitat Area B. Invasive plant species such as Scotch broom (*Cytisus scoparius*), Himalayan blackberry, and Canada thistle (*Cirsium arvense*) are evident but do not appear to be problematic at this time. In general, riparian and wetland vegetation has established at a satisfactory density and is providing protective cover and food for wildlife as well as shading for the constructed fish habitats.

3.3.2.3 Water Quality

Results from the water quality assessments at stations WQ-B1 through WQ-B5 are summarized in Table 3.5 below. Dissolved oxygen concentrations during the June 28, 2005 sampling period ranged from a minimum of 5.39 mg/L to a maximum of 8.64 mg/L; two stations produced readings below levels at which salmonids show initial distress symptoms (i.e. WQ-B1 & WQ-B5). Dissolved oxygen concentrations during the November 4, 2004 sampling period ranged from a minimum of 8.63 mg/L to a maximum of 10.90 mg/L, above levels at which salmonids show initial distress symptoms[3]. Measured pH was within the range required to protect freshwater aquatic life[4] and ranged from a minimum of 7.1 to a maximum of 7.5; although measured pH was not recorded during the November visit due to malfunctioning meter. Temperature ranged from a minimum of 2.3°C to a maximum of 18.4°C, below lethal levels for salmonids[2].

Table 3.5 Water Quality Sampling Results – Habitat Area B

Sample Year, Date and Station			pH	Temp.[a] (°C)	DO[b] (mg/L)
Year 4	June 28, 2005	WQ-B1	7.1	15.6	5.39
		WQ-B2	7.5	18.1	8.64
		WQ-B3	7.4	18.4	6.62
		WQ-B4	7.4	15.9	6.35
		WQ-B5	7.4	16.2	5.75
	November 30, 2005	WQ-B1	*	3.9	10.90
		WQ-B2	*	3.1	10.77
		WQ-B3	*	2.3	8.40
		WQ-B4	*	4.6	8.60
		WQ-B5	*	4.8	8.63

[a] temperature
[b] dissolved oxygen
* pH meter malfunctioning during visit

3.3.2.4 Channel Flow Velocity

During each site assessment channel flow velocity was insufficient (i.e. less than the minimum measurable flow of 0.027m/s) to conduct flow metering.

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3.3.2.5 Fish Utilization

Largemouth bass (*Micropterus salmoides*) and threespine stickleback were captured utilizing the constructed habitats in 2005. The locations of fish sampling stations are identified in Figure 3. Table 3.6 below summarizes results from the fish sampling for the 2005 monitoring period.

Table 3.6 Fish Sampling Results – Fish Habitat Area B

Station	Fish Species[a]	Sample Year and Date	
		Year 4 (2005)	
		June 28, 2005	November 30, 2005
FSS-B1	TSB	40	9
FSS-B2	No Capture	-	-
FSS-B3	LMB	1	-
FSS-B4	TSB	1	6
	LMB	-	1
FSS-B5	TSB	10	6

[a] species codes TSB threespine stickleback (*Gasterosteus aculeatus*)
LMB largemouth bass (*Micropterus salmoides*)

3.3.2.6 Invertebrate Sampling

Invertebrate sampling was not a requirement during this monitoring period.

3.3.3 Habitat Area C

3.3.3.1 Physical Stability

The west first flush treatment wetland is stable and appears to be functioning as intended. There was no evidence of stability problems within Habitat Area C.

3.3.3.2 Riparian Vegetation

The tree and shrub vegetation within and adjacent to the wetland of the west first flush treatment wetland is displaying dense and vigorous growth. The wetland is densely vegetated with high species diversification; although cattail is the dominant plant species of the wetland and outlet channel. The tree and shrub community immediately adjacent to the treatment wetland is vigorous and well established on the lower portion of the banks. Dominant shrub and tree plant species are red alder (*Alnus rubra*), willow (*Salix* spp.), hardhack (*Spiraea douglasii*), and thimbleberry (*Rubus parviflorus*). Invasive plant species (e.g. blackberry and scotch broom) are evident within Habitat Area C.

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3.3.3.3 Water Quality

Results from the water quality assessments at stations WQ-C1 and WQ-C2 are summarized in Table 3.7 below. Dissolved oxygen concentrations during the June 28, 2005 sampling period ranged from a minimum of 0.72 mg/L to a maximum of 2.70 mg/L, below levels at which salmonids show initial distress symptoms. Dissolved oxygen concentrations during the November 30, 2005 sampling period ranged from a minimum of 9.66 mg/L to a maximum of 11.51 mg/L, above levels at which salmonids show initial distress symptoms[3]. During the June monitoring visit measured pH was within the range required to protect freshwater aquatic life[4]. Temperature ranged from a minimum of 4.6°C to a maximum of 16.9°C, below lethal levels for salmonids[2].

Table 3.7 Water Quality Sampling Results – Habitat Area C

Sample Year, Date and Station			pH	Temp.[a] (°C)	DO[b] (mg/L)
Year 4	June 28, 2005	WQ-C1	6.9	16.9	2.70
		WQ-C2	6.8	15.5	0.72
	November 30, 2005	WQ-C1	*	4.7	11.51
		WQ-C2	*	4.6	9.66

[a] temperature
[b] dissolved Oxygen
* pH meter malfunctioning during visit

3.3.3.4 Channel Flow Velocity

Channel flow velocity within the constructed outlet channel was not measured; plant density and insufficient water movement within the wetland habitat prohibited flow velocity measurements.

3.3.3.5 Fish Utilization

Threespine stickleback were captured within the constructed habitat. The locations of the fish sampling stations are identified in Figure 3. Table 3.8 below summarizes results from the fish sampling. Additionally, two (2) northwestern salamander were captured in the traps.

Table 3.8 Fish Sampling Results – Fish Habitat Area C

Station	Fish Species[a]	Sample Year and Date	
		Year 4 (2005)	
		June 28, 2005	November 30, 2005
FSS-C1	TSB	3	52
	NWS	1	-
FSS-C2	TSB	10	20
	NWS	1	-

[a] species code TSB threespine stickleback (*Gasterosteus aculeatus*)
NWS northwestern salamander (*Ambystoma gracile*)

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3.3.4 Habitat Area D

3.3.4.1 Physical Stability

The east first flush treatment wetland and realigned channel appear to be functioning as intended. The habitat banks are stable; plant material is well established on the banks and berms within the habitat area. There is no evidence of recent slumping within Habitat Area D. The culvert crossing, headwalls and instream structures (i.e. large organic debris) appear stable with no evidence of movement or debris accumulation. Channel substrates (i.e. cobbles and gravels) have migrated to downstream portions of the channels exposing clay within the upper portions.

3.3.4.2 Riparian Vegetation

Cattail is the dominant wetland species adjacent to the pond edges, channel and wetland areas. A strong diversity of plant species, has established along the total length of the watercourse within Habitat Area D. The riparian plant material on the lower portion of the banks is vigorous becoming less vigorous with increased elevation.

During grading and site clearing on Lot 210 (southwest property adjacent to Habitat Area D) numerous plant material was damaged and/or removed; Gloucester Industrial Estates was informed of the incident and will ensure that the developer undertakes mitigation (i.e. installation of replacement plant material and a chainlink fence) prior to construction.

3.3.4.3 Water Quality

Results from the water quality assessments at stations WQ-D1 and WQ-D2 are summarized in Table 3.9 below. Dissolved oxygen concentrations during the June 28, 2005 sampling period ranged from a minimum of 3.65 mg/L to a maximum of 4.32 mg/L, below levels at which salmonids show initial distress symptoms[3]. Dissolved oxygen concentrations during the November 30, 2005 sampling period ranged from a minimum of 10.16 mg/L to a maximum of 11.72 mg/L, above levels at which salmonids show initial distress symptoms[3]. Measured pH was within the range required to protect freshwater aquatic life[4] and ranged from a minimum of 7.1 to a maximum of 7.4. Temperature ranged from a minimum of 2.8°C to a maximum of 16.5°C, below lethal levels for salmonids[2].

Table 3.9 Water Quality Sampling Results – Habitat Area D

Sample Year, Date and Station			pH	Temp.[a] (°C)	DO[b] (mg/L)
Year 4	June 28, 2005	WQ-D1	7.1	15.6	3.65
		WQ-D2	7.4	16.5	4.32
	November 30, 2005	WQ-D1	*	2.8	10.16
		WQ-D2	*	3.2	11.72

[a] temperature
[b] dissolved oxygen
* pH meter malfunctioning during visit

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3.3.4.4 Channel Flow Velocity

Channel flow velocity within the hydraulic channel was measured within the approximate middle section of the realigned channel immediately upstream and downstream of the Gloucester Way culvert crossing. The measured channel flow velocity on November 30, 2005 was 0.278 m/s downstream. Table 3.10 below summarizes the measured flow velocities for Habitat Area D during the 2005 habitat monitoring program.

Table 3.10 Channel Flow Velocity – Habitat Area D

Sample Year, Date and Station			Velocity (m/s)
Year 4	June 28, 2005	WQ-D1	*
		WQ-D2	*
	November 30, 2005	WQ-D1	0.278
		WQ-D2	*

* insufficient water depth for measurement

3.3.4.5 Fish Utilization

Threespine stickleback and northwestern salamander were captured within the channel pools during the 2005 monitoring period. The locations of fish sampling stations are identified in Figure 4 (Attachment A). Table 3.11 below summarizes the results from fish sampling during the 2005 monitoring program.

Table 3.11 Fish Sampling Results – Fish Habitat Area D

Station	Fish Species[a]	Sample Year and Date	
		Year 4 (2005)	
		June 28, 2005	November 30, 2005
FSS-D1	TSB	12	9
	NWS	1	-
FSS-D2	TSB	3	4
FSS-D3	TSB	20	1
FSS-D4	TSB	30	20

[a] Species codes TSB threespine stickleback (*Gasterosteus aculeatus*)
NWS northwestern salamander (*Ambystoma gracile*)

3.3.4.6 Invertebrate Sampling

Invertebrate sampling was not a requirement during this monitoring period.

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3.3.5 Habitat Area E

3.3.5.1 Physical Stability

The channels and ponds are stable and appear to be functioning as intended. Evidence of erosion, slumping, or tension cracks was not observed and root wads within the ponds are stable.

3.3.5.2 Riparian Vegetation

The riparian and wetland plant material within Habitat Area E has become well established and is displaying vigorous growth and stem density. The riparian and wetland plant material is providing a viable and diverse plant assemblage which appears to be functioning as intended.

3.3.5.3 Water Quality

Results from the water quality assessments at stations WQ-E1 and WQ-E2 are summarized in Table 3.12 below. Dissolved oxygen concentrations during the June 28, 2005 sampling period ranged from a minimum of 5.60 mg/L to a maximum of 6.85 mg/L, one (1) station produced readings below levels at which salmonids show initial distress symptoms[3]. Dissolved oxygen concentrations during the November 30, 2005 sampling period ranged from a minimum of 8.07 mg/L to a maximum of 8.67 mg/L, above levels at which salmonids show initial distress symptoms[4]. Measured pH was within the range required to protect freshwater aquatic life and ranged from a minimum of 6.9 to a maximum of 7.5. Temperature ranged from a minimum of 2.6°C to a maximum of 17.8°C, below lethal levels for salmonids[2].

Table 3.12 Water Quality Sampling Results – Habitat Area E

Date	Station	pH	Temp.[a] (°C)	DO[b] (mg/L)
June 28, 2005	WQ-E1	7.5	17.8	6.85
	WQ-E2	6.9	17.6	5.60
November 30, 2005	WQ-E1	*	2.6	8.07
	WQ-E2	*	3.5	8.67

[a] temperature
[b] dissolved oxygen
* pH meter malfunctioning during visit

3.3.5.4 Channel Flow Velocity

Channel flow velocity within the constructed outlet channel was not measured due to insufficient water depths within the hydraulic channel during the site assessments. The hydraulic channel was dry during the June 28, 2005 site visit. Surface flow was observed within the hydraulic channel during the November 30, 2005 site assessment, although water depth was not conducive to undertaking flow velocity measurements.

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3.3.5.5 Fish Utilization

Fish sampling was conducted within each of the two online ponds. Fish were not captured; nine (9) northwestern salamander (neotenic) were captured in both ponds.

3.3.5.6 Invertebrate Sampling

Invertebrate sampling was not a requirement during this monitoring period; although during the June 28, 2005 fish sampling event numerous caddis fly (ORDER TRICHOPTERA) larvae and dragonfly (ORDER ODONATA) larvae were captured in the traps.

3.4 Summary of Post Construction Monitoring

Results obtained during the fourth year of the post-construction monitoring program indicate that:

- all habitat areas are stable and remedial works are not required; although beaver dams are evident in some areas and may require removal to avoid compromising the storm water management plan for Gloucester Industrial Estates;
- plant material continues to display vigorous and dense growth within the habitat areas. The plant assemblages within all habitat areas fulfills the requirements/specifications of the landscape plan and Section 32(d) of the Authorization. Replacement planting will be undertaken within the southwest portion of Habitat Area D to mitigate damage of plant material during site clearing;
- the west and east first flush treatment wetlands are densely colonized with wetland vegetation and appear to be functioning as intended;
- water quality parameters (i.e. dissolved oxygen) measured at some locations during the June 2005 monitoring period were below acceptable levels at which salmonids show initial distress symptoms. All other water quality parameters (i.e. pH, temperature, and dissolved oxygen) measured during June and November 2005 were within the accepted ranges for salmonid presence within all constructed fish habitats;
- minimum and maximum measured channel velocities were 0.239 m/s within Habitat Area A on November 30, 2005 and 0.278 m/s within Habitat Area D on November 30, 2005;
- during this sampling year there was no capture of salmonid species within any of the Habitat Areas. Threespine stickleback mortalities were observed during the June 2005 sampling visit; likely due to the low dissolved oxygen levels;

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- threespine stickleback were captured utilizing Habitat Areas A through D. Largemouth bass were captured utilizing Habitat Area B; northwestern salamander were captured utilizing Habitat Areas A, C, D and E; and frog tadpoles were captured within Habitat Area B; and

- invertebrate sampling was not required during this years monitoring period; although a large number of caddis fly and dragon fly larvae were captured within the minnow traps at Habitat Area E.

4.0 SUMMARY

This report details environmental monitoring and post construction monitoring of constructed habitats associated with Gloucester Industrial Estates during 2005. The report addresses Condition #19 and Condition #32 (a) through (i) of the Subsection 35(2) federal Fisheries Act Authorization No. 99-HPAC-PA2-000-000217 for instream works and post construction monitoring, respectively. Section 2.0 comprises the environmental monitoring report for completion of deficiencies within the Gloucester Detention Ponds located east of 272 Street and south of 56 Avenue. Section 3.0 comprises the fourth year of post construction monitoring of Habitat Areas A through E constructed during 1997, 2000, and 2001.

Observations from the 2005 habitat monitoring program include the following:

- continued compliance with approval conditions and high functional success of constructed habitats;

- deficiencies related to the pond habitat located east of 272 Street and south of 56 Avenue were completed during the 2005 fisheries window;

- beaver (i.e. relocating of) and beaver dams (i.e. removal of) will require attention throughout Habitat Areas A and B;

- for the first time since the monitoring program commenced there was no capture of salmonid species in any of the habitat areas. Other aquatic lifeforms were captured within all habitat areas; and

- vegetation within all habitat areas is displaying vigorous growth and is developing into viable riparian and marsh plant assemblages.

Gloucester Industrial Estates continues to remain up to date with respect to reporting obligations associated with federal Fisheries Act Authorization No. 99-HPAC-PA2-000-000217.

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ATTACHMENT A

Gloucester Industrial Estates
Site Map and Monitoring Stations
Figures 1 Through 4

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HABITAT

SCALE 1:75

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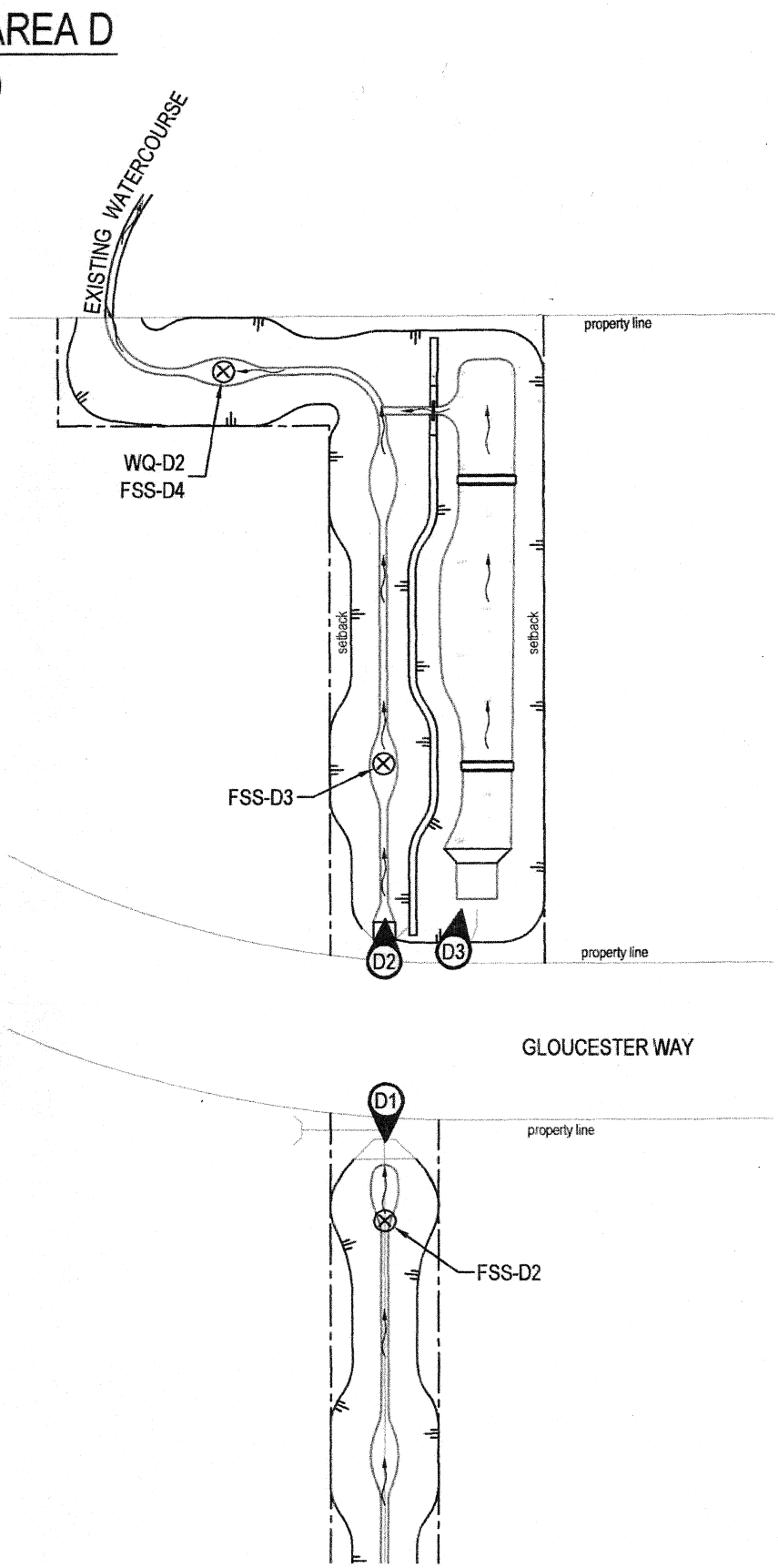
T AREA D

750



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HABITAT AREA E

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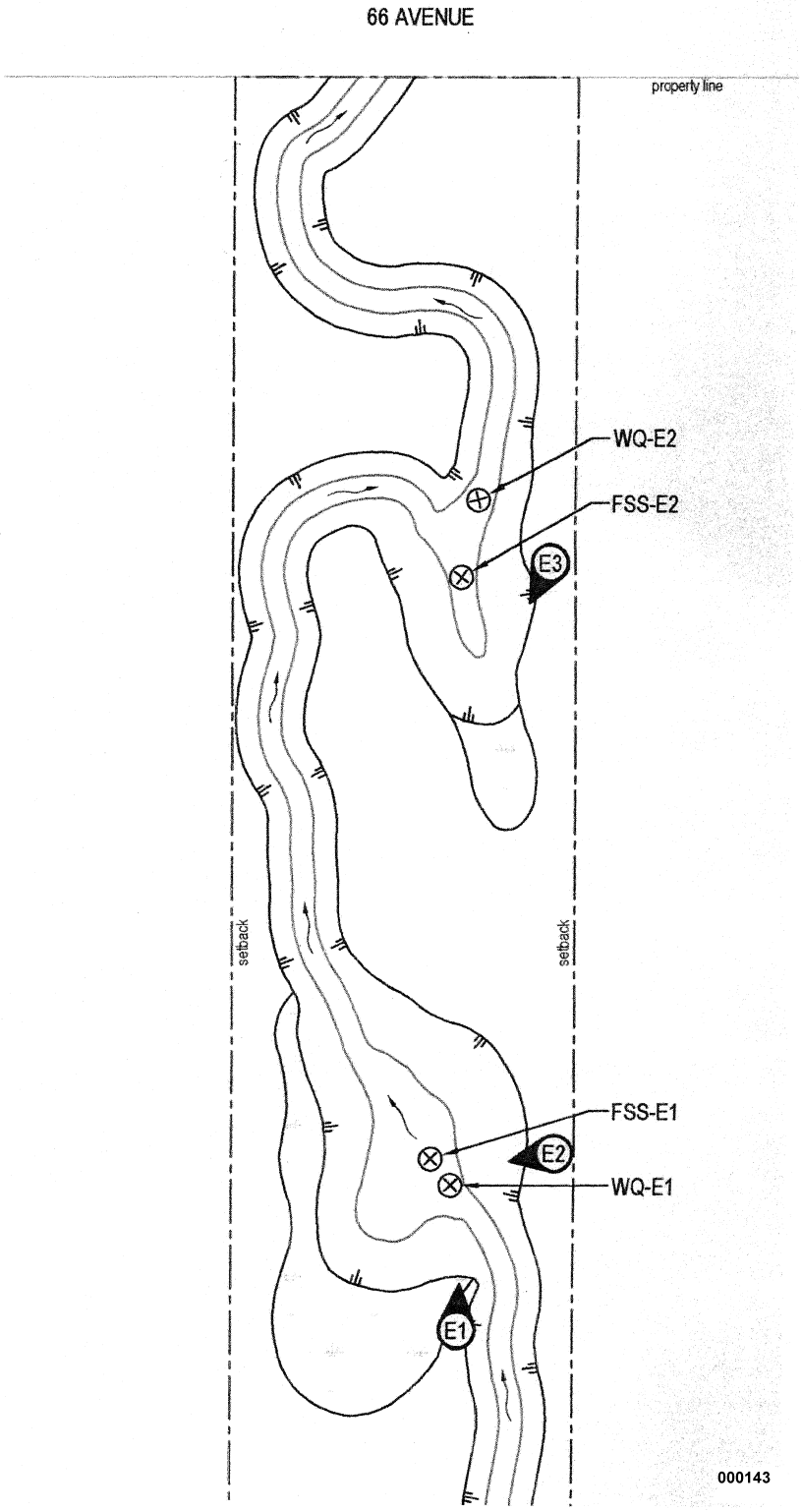

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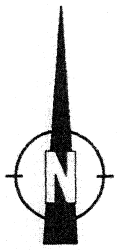

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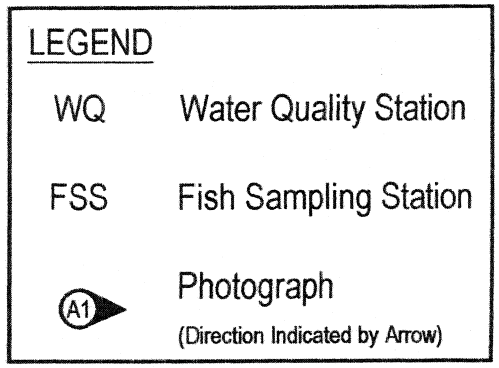

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LAYOUT: FIGURE 4

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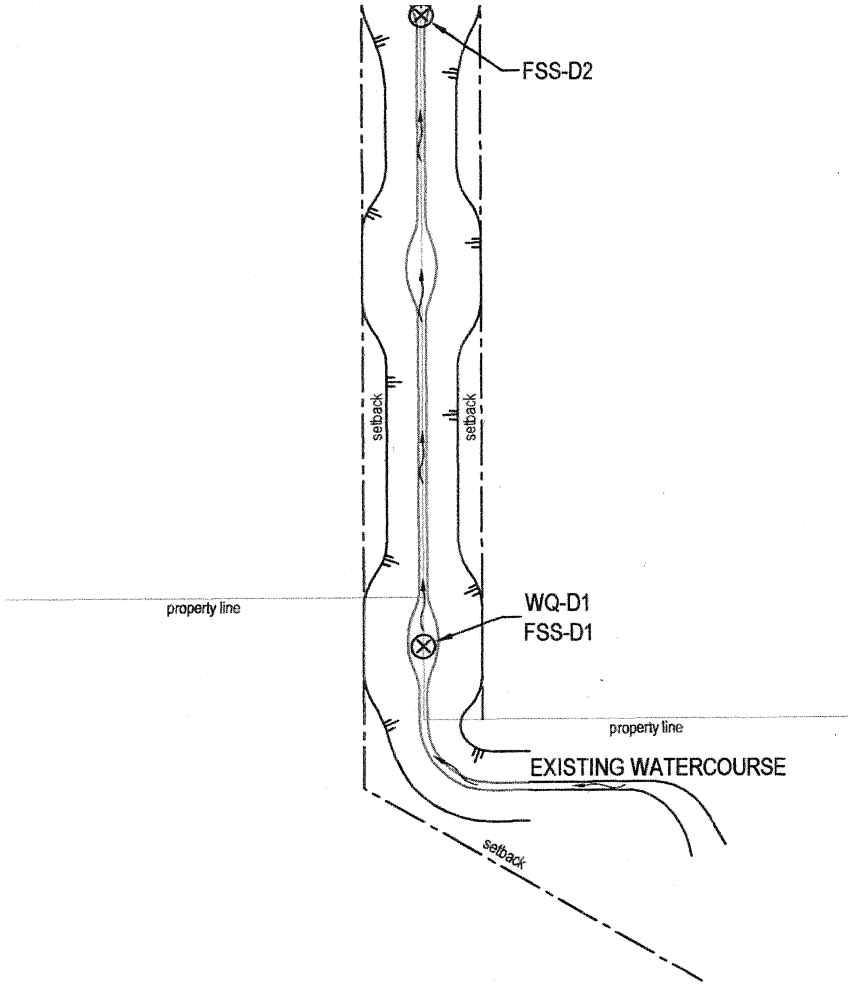

GLOUCESTER INDUSTRIAL ESTA
Langley, BC

POST CONSTRUCTION HABITAT MON

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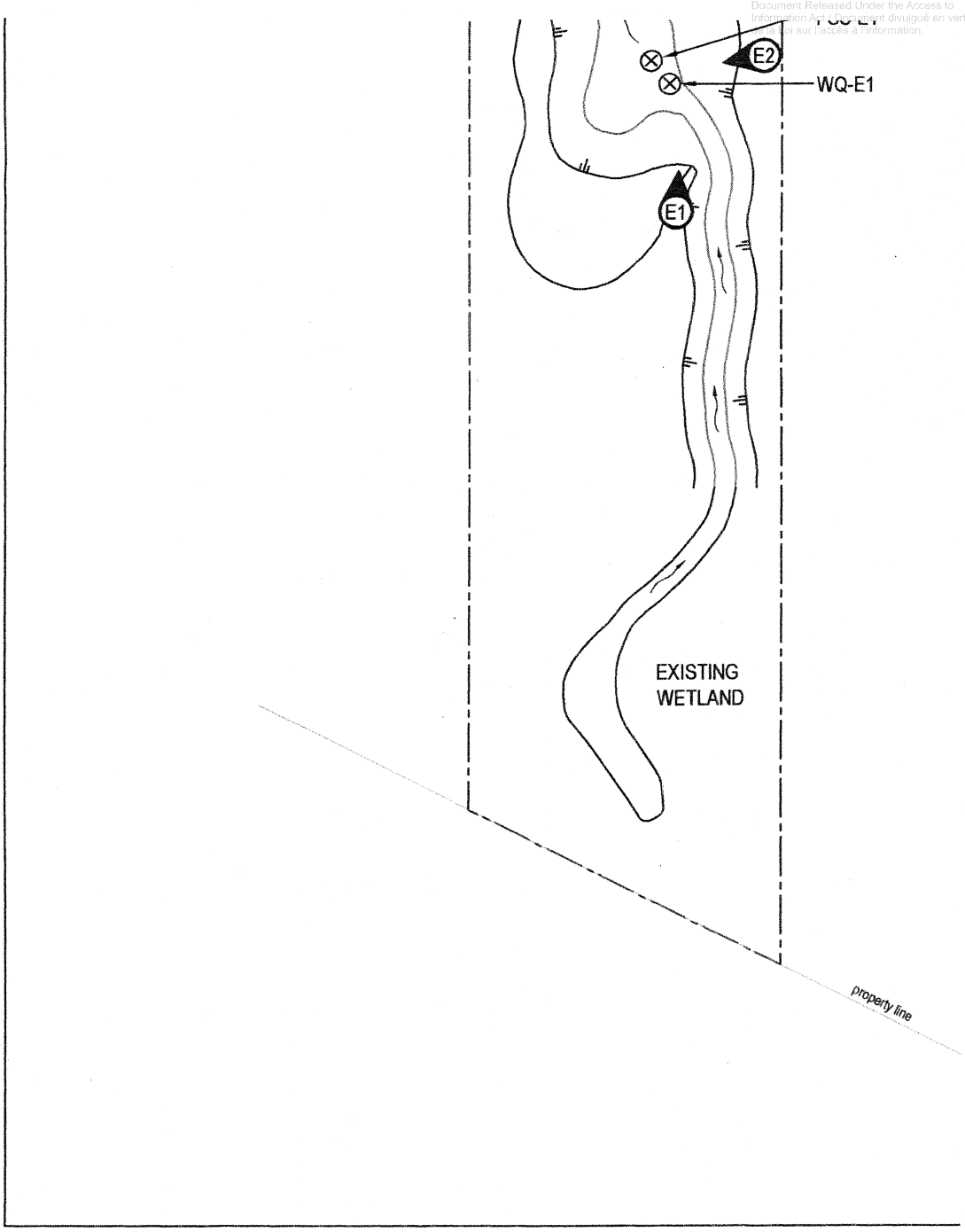

ATES

MONITORING

envirowes
ENVIRONMENTAL CONSULTAN
ECL ENVIROWEST CONSULTANTS LIMITED
Suite 130 - 3700 North Fraser Way
Burnaby, B.C. V5J 5J4
www.ecl-envirowest.b
voice: 604-451-(
facsimile: 604-451-(

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MONITORING STATIONS

DESIGN:	DRAWN:	CHECKED:	REVISION:	REVISION DATE:
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SCALE: As Shown			DRAWING NUMBER: FIGURE 4	
DATE: January 2006				SHEET 4 OF 4

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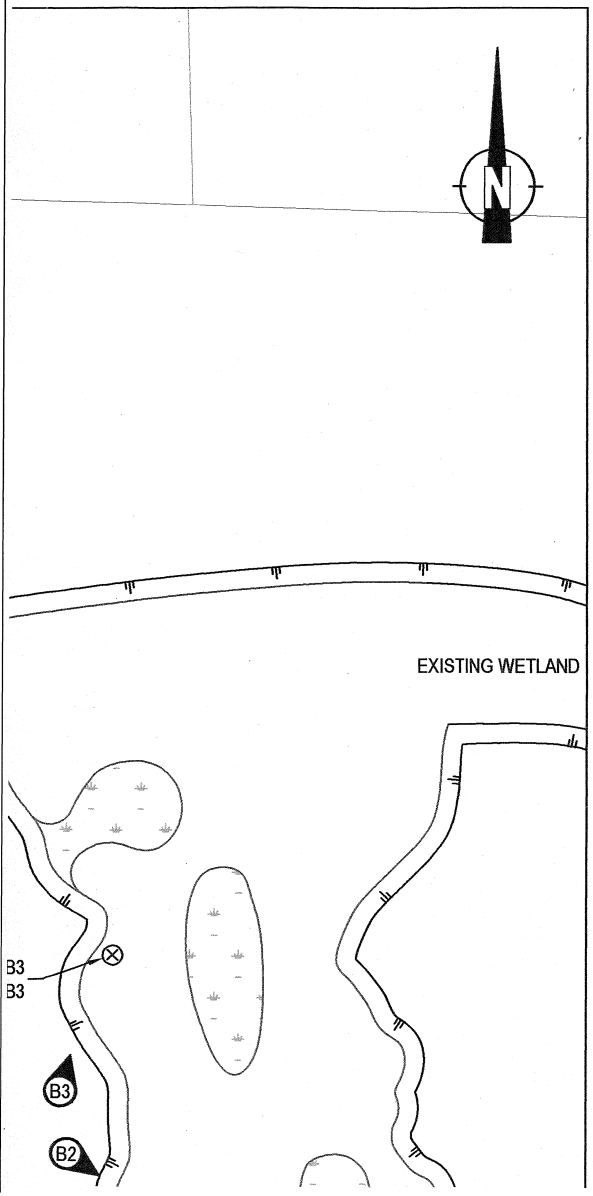
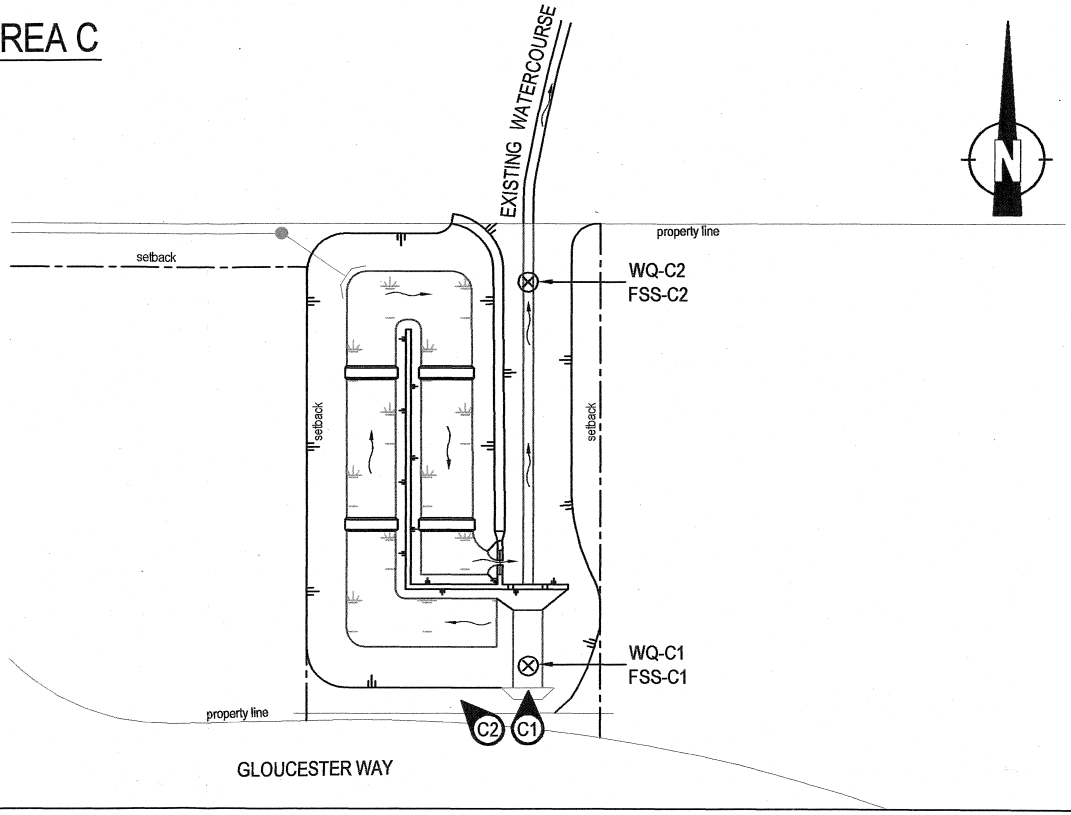


HABITAT AREA C

SCALE 1:500



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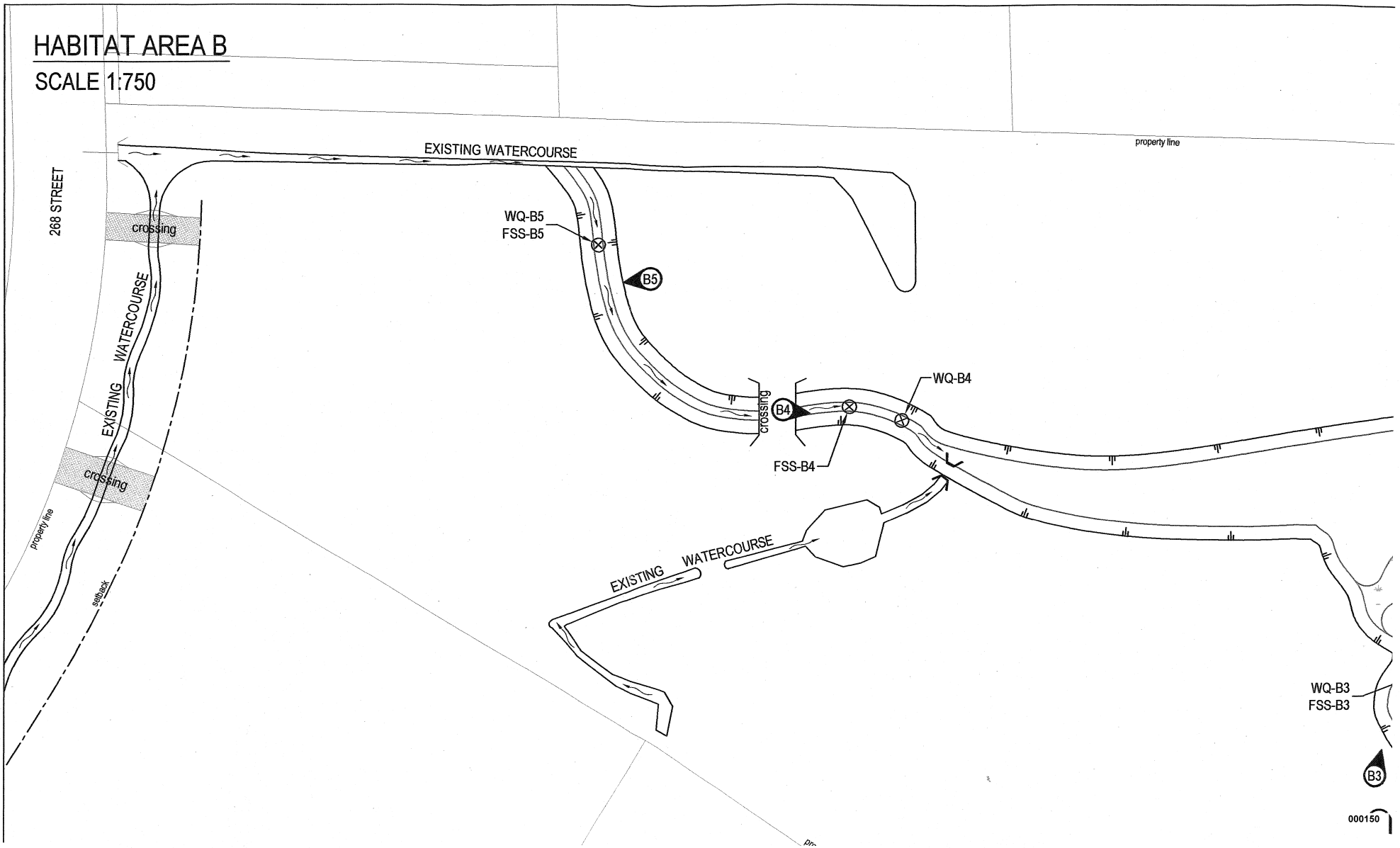
HABITAT AREA B

SCALE 1:750



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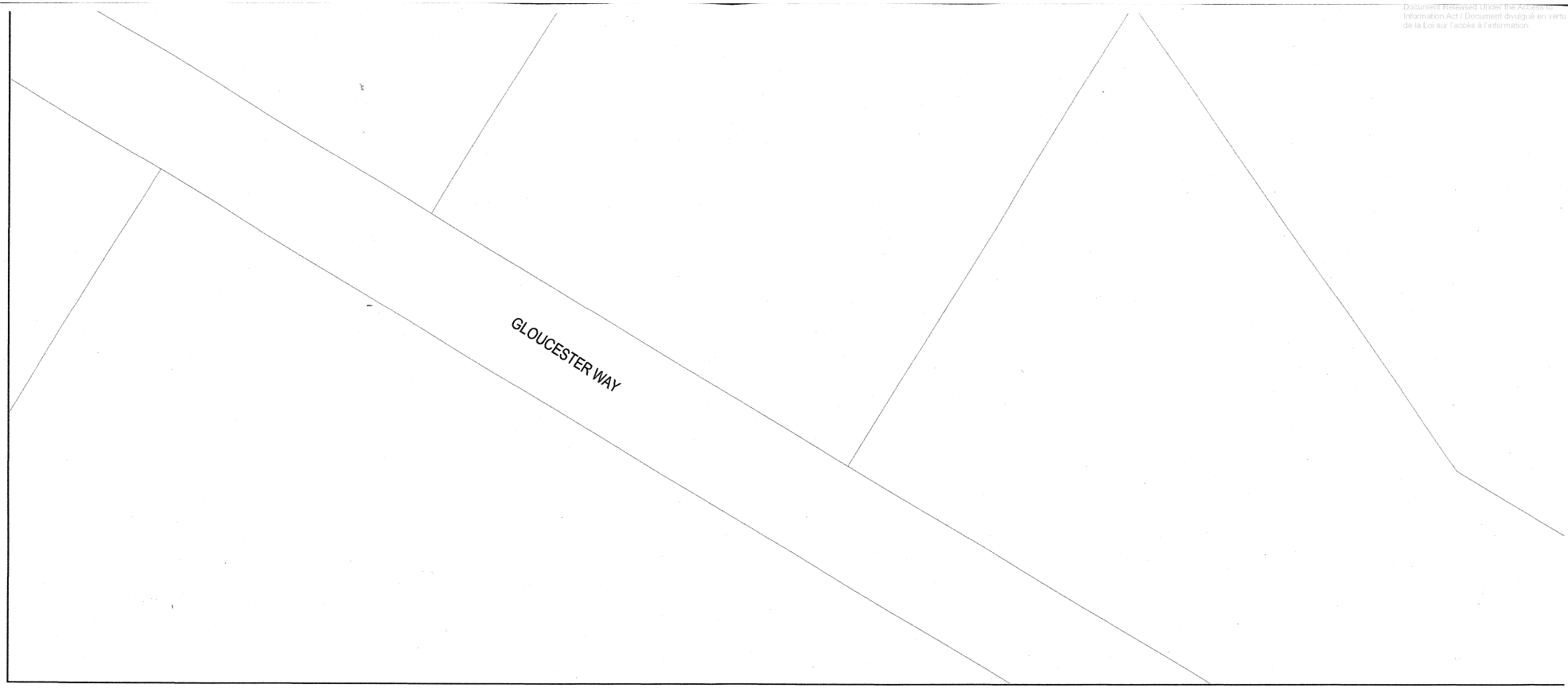

LEGEND

WQ	Water Quality Station
FSS	Fish Sampling Station
A1	Photograph (Direction Indicated by Arrow)

GLOUCESTER INDUSTRIAL ESTATES
Langley, BC

POST CONSTRUCTION HABITAT MONITOR

000151

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LAYOUT: FIGURE 3

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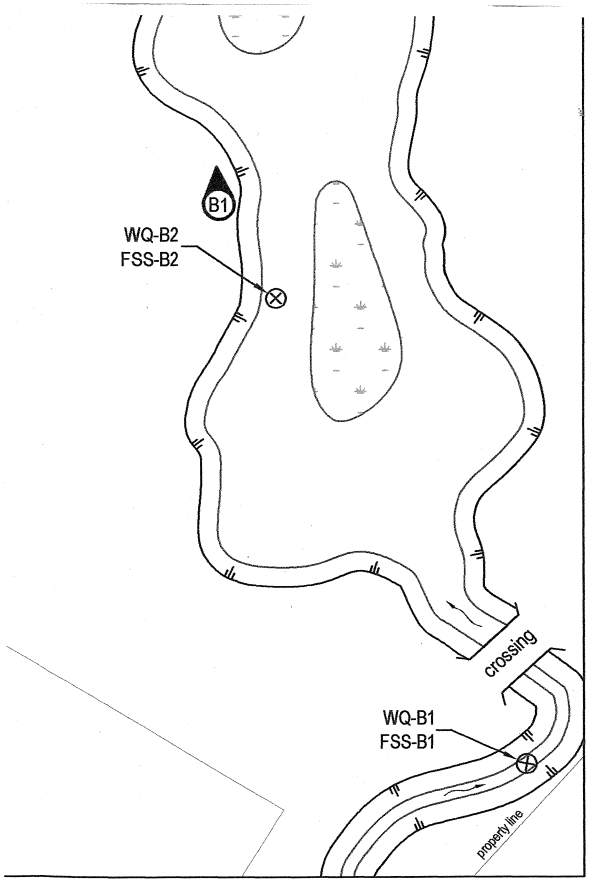

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envirowest
ENVIRONMENTAL CONSULTANTS

ECL ENVIROWEST CONSULTANTS LIMITED
Suite 130 - 3700 North Fraser Way
Burnaby, B.C. V5J 5J4

www.ecl-envirowest.bc.ca
voice: 604-451-0505
facsimile: 604-451-0557

MONITORING STATIONS

DESIGN:	DRAWN:	CHECKED:	REVISION:	REVISION DATE:
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SCALE: As Shown

DATE: January 2006

DRAWING NUMBER:

FIGURE 3

SHEET 3 OF 4

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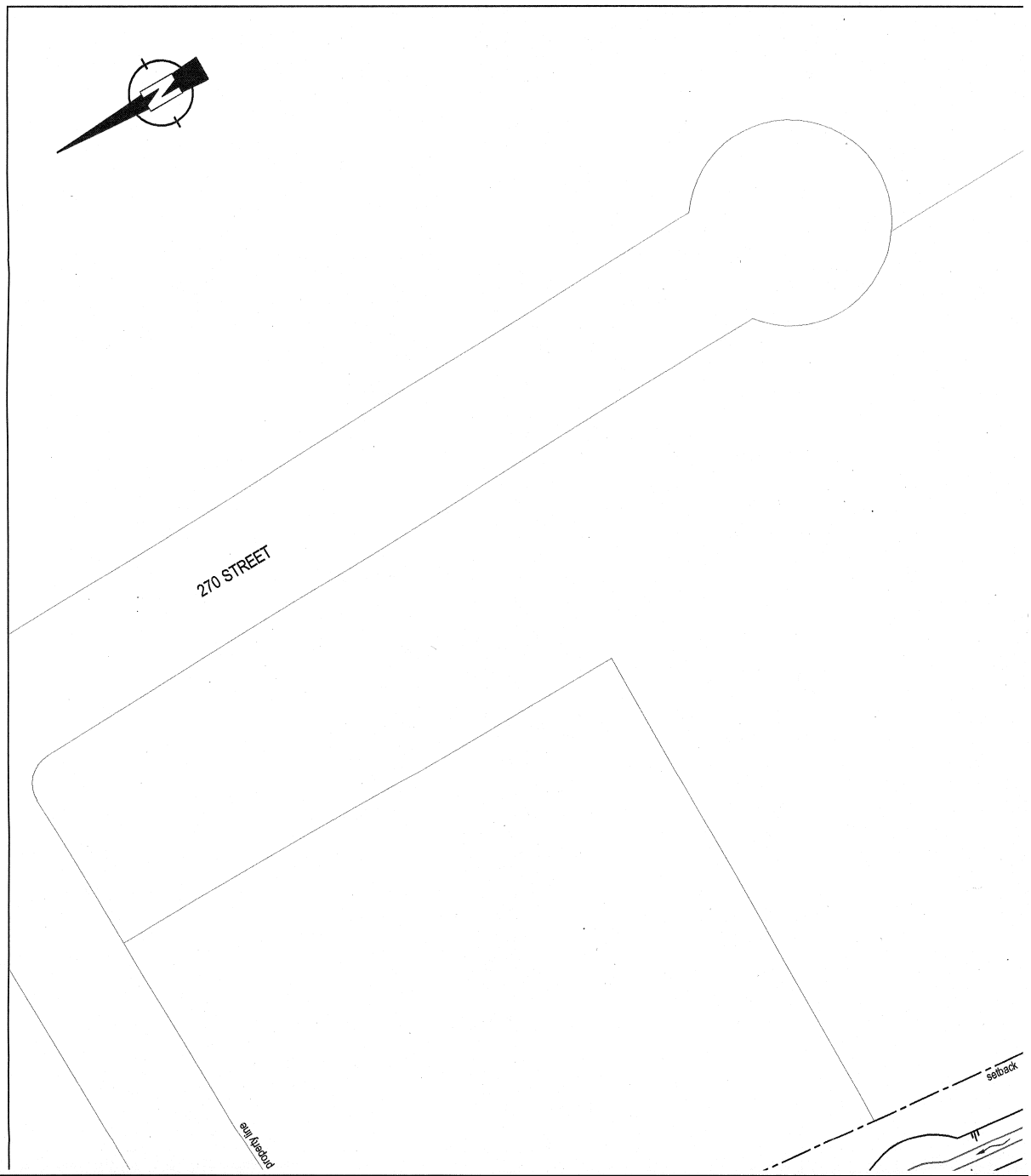

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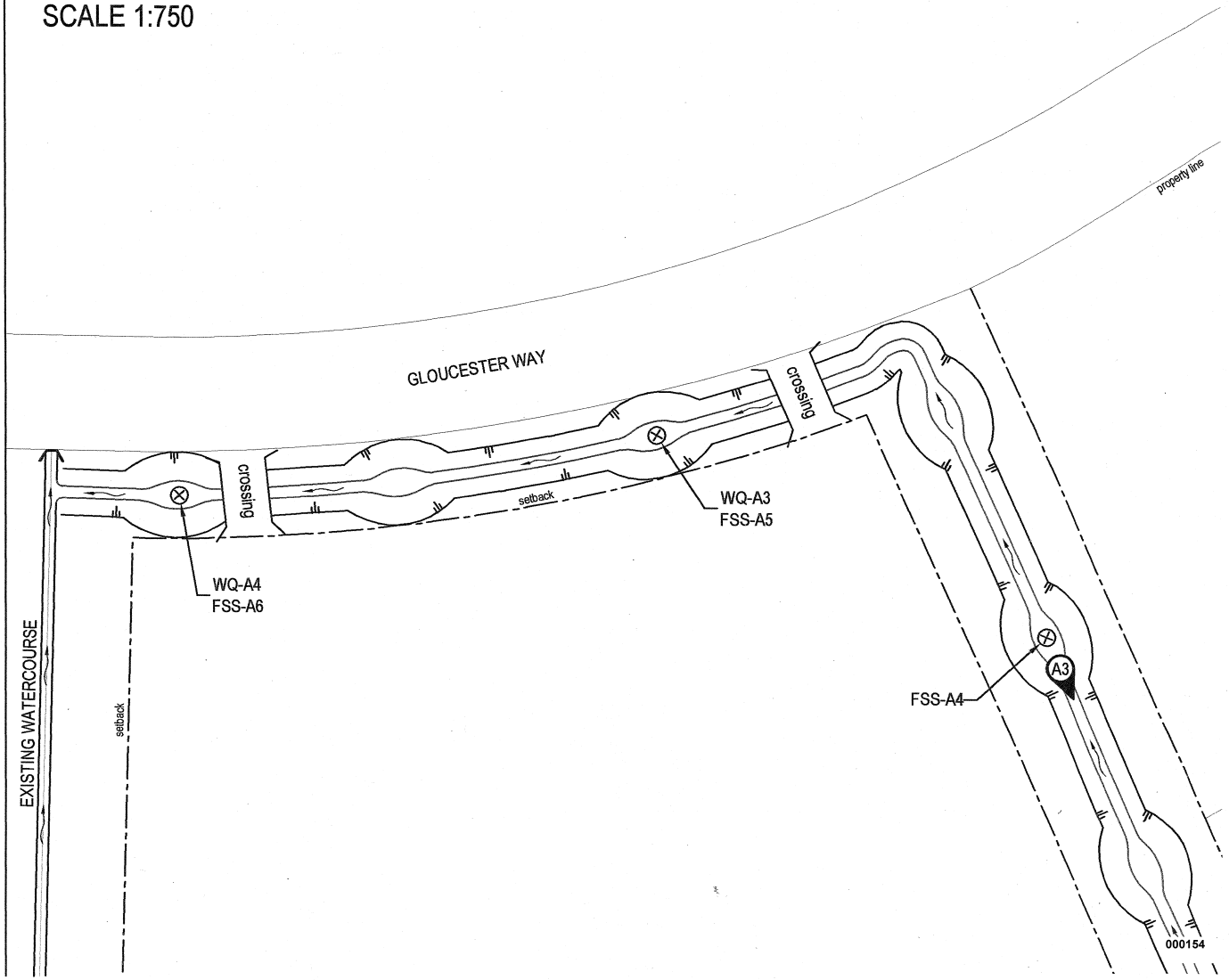
HABITAT AREA A

SCALE 1:750



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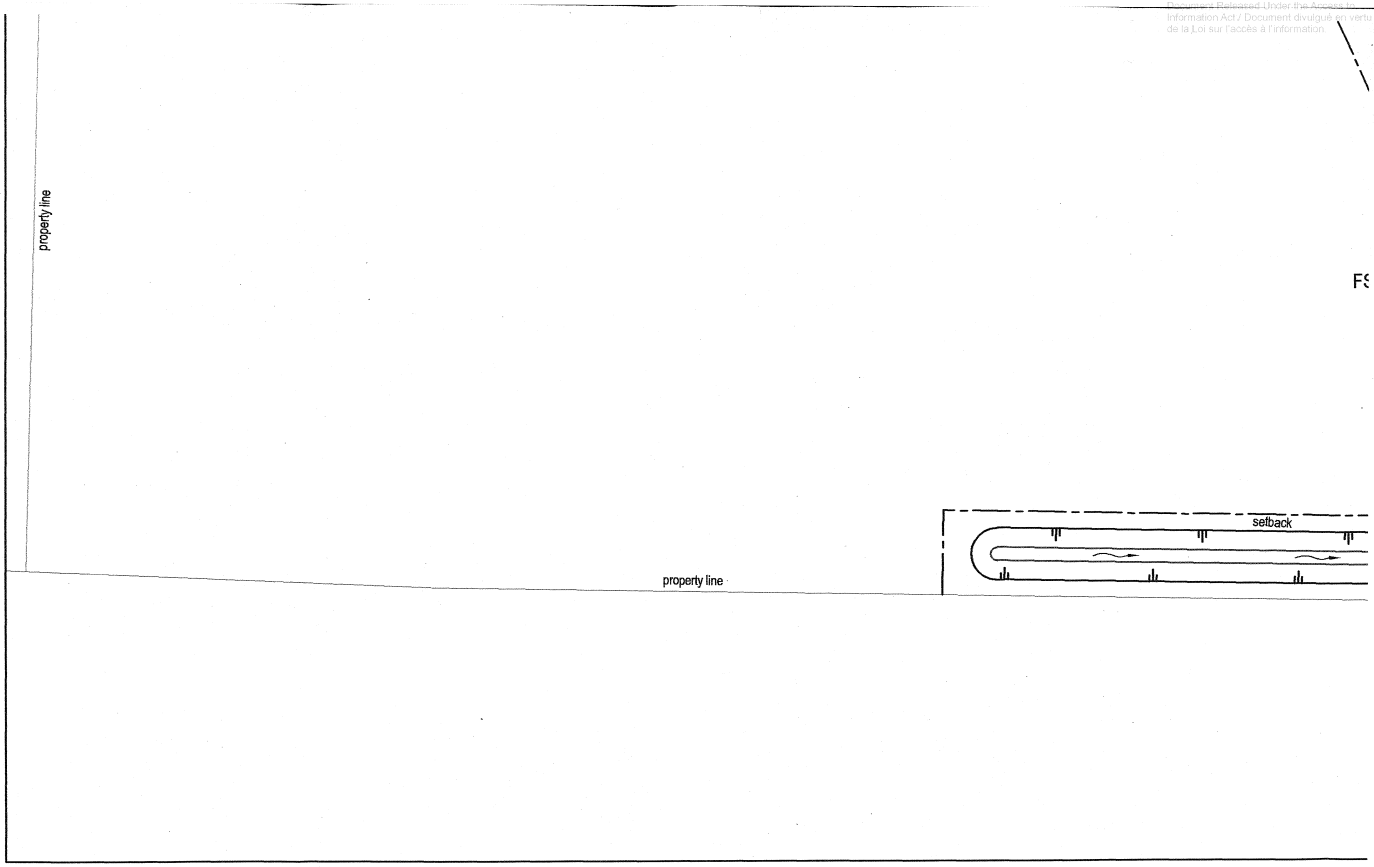

LEGEND

WQ	Water Quality Station
FSS	Fish Sampling Station
A1	Photograph (Direction Indicated by Arrow)

GLOUCESTER INDUSTRIAL ESTATES
Langley, BC

POST CONSTRUCTION HABITAT MONITOR

000155

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LAYOUT: FIGURE 2

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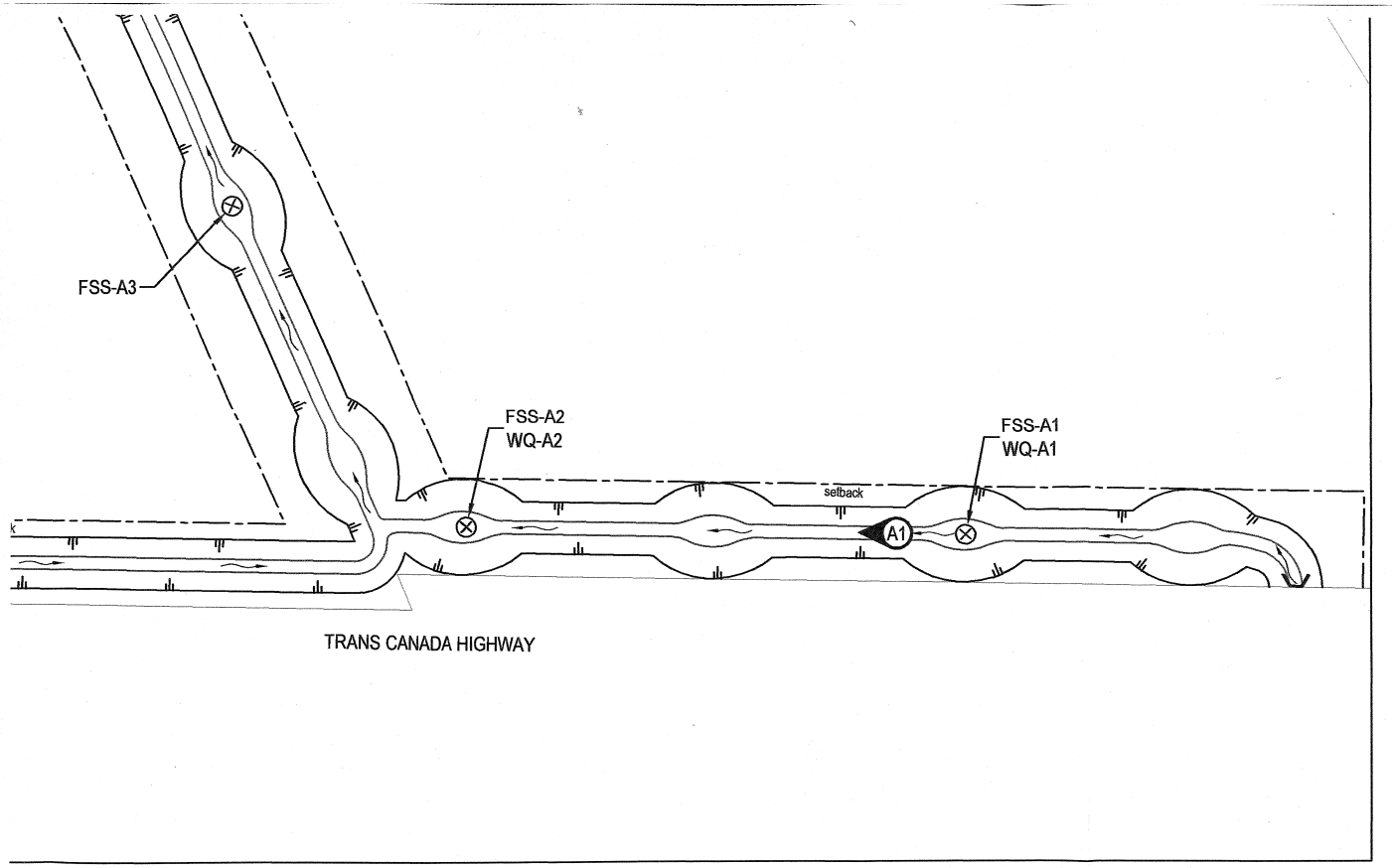

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ENVIRONMENTAL CONSULTANTS

ECL ENVIROWEST CONSULTANTS LIMITED
Suite 130 - 3700 North Fraser Way
Burnaby, B.C. V5J 5J4

www.ecl-envirowest.bc.ca
voice: 604-451-0505
facsimile: 604-451-0557

MONITORING STATIONS

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SCALE: As Shown

DATE: January 2006

DRAWING NUMBER: FIGURE 2

SHEET 2 OF 4

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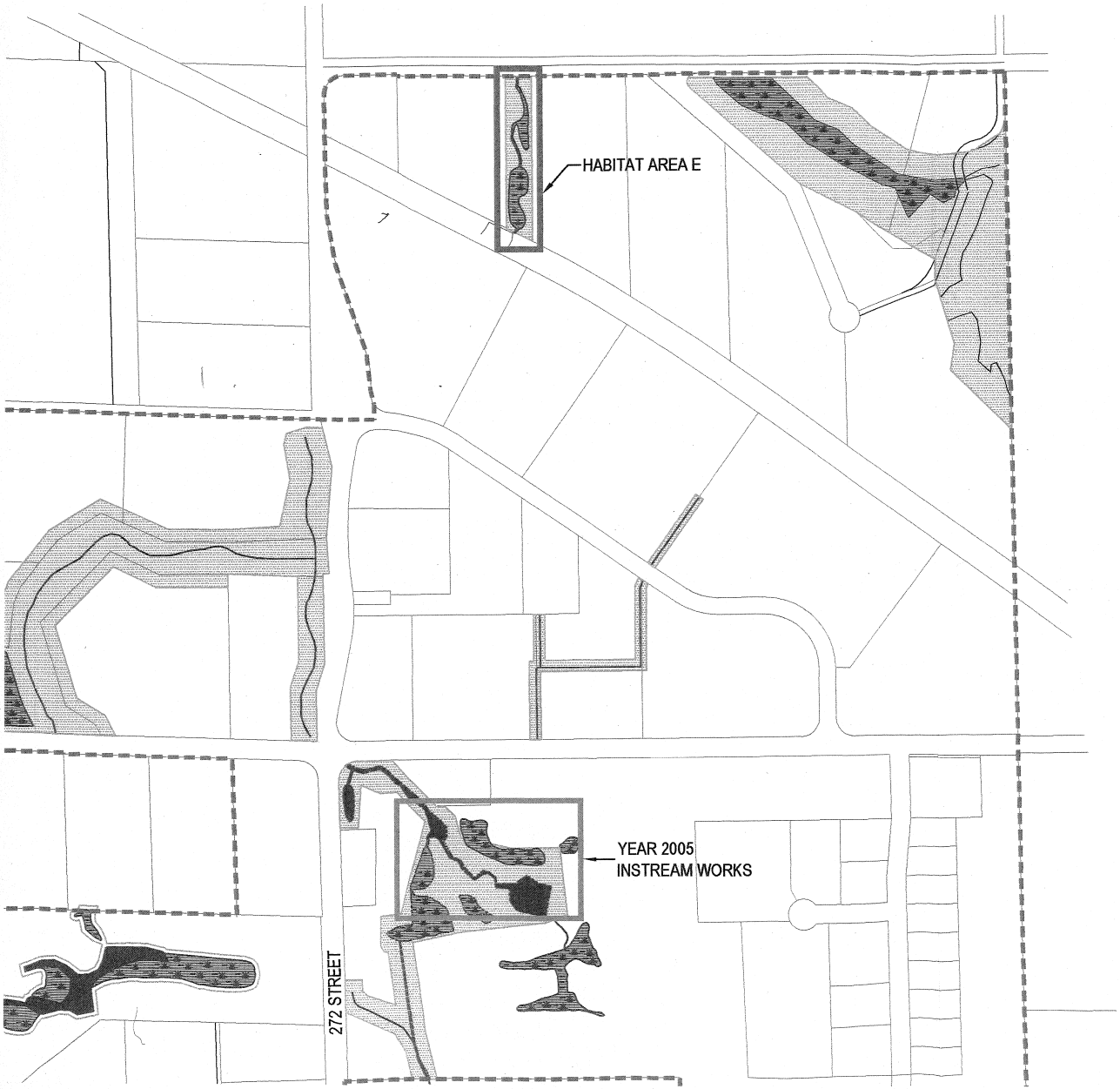

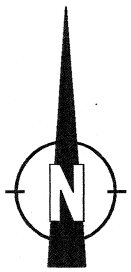

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SITE MAP

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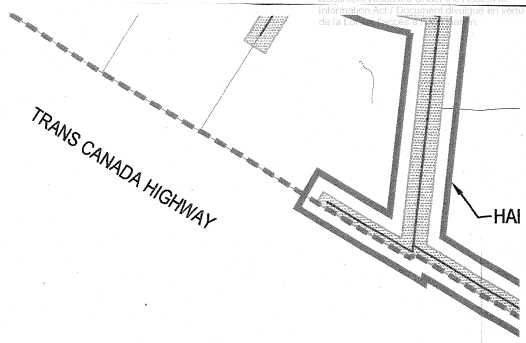

GLOUCESTER INDUSTRIAL ESTATES
Langley, BC

POST CONSTRUCTION HABITAT MONITOF

000159

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LAYOUT: FIGURE 1

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SITE MAP

DESIGN:	DRAWN:	CHECKED:	REVISION:	REVISION DATE:
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SCALE: As Shown

DATE: January 2006

DRAWING NUMBER: FIGURE 1

SHEET 1 OF 4

000160

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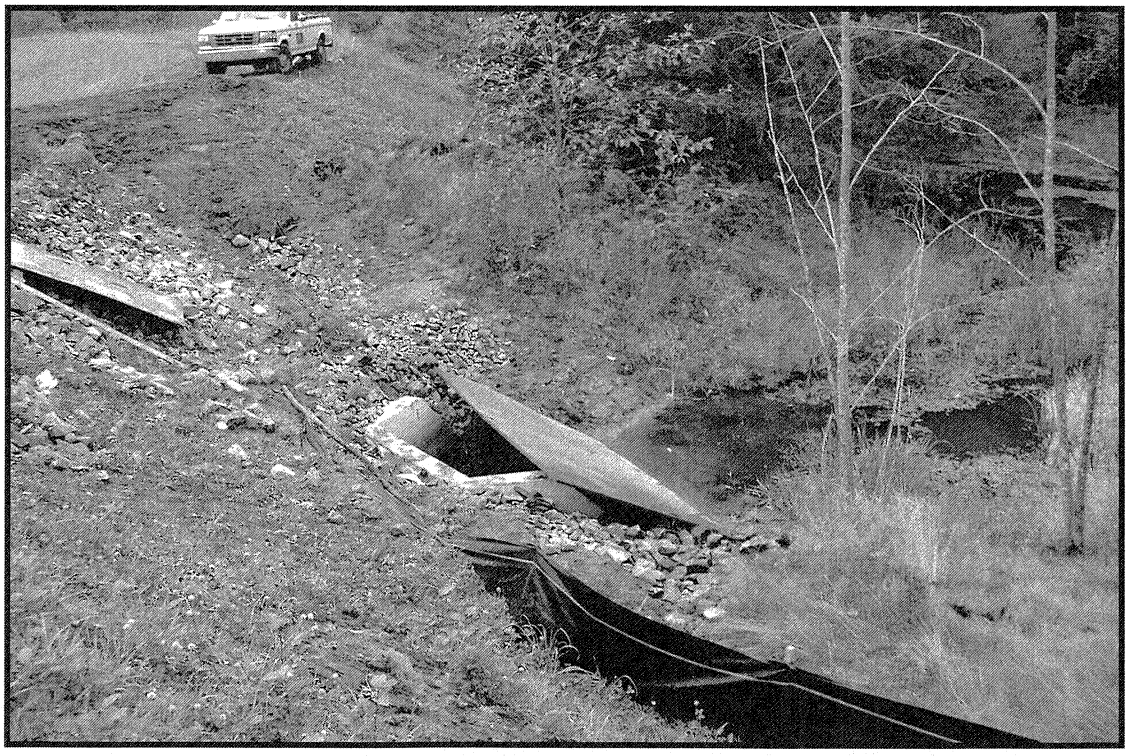
ATTACHMENT B

Gloucester Industrial Estates
Year 2005 Instream Works
Photographs

Document Released Under the Access to Information Act / Document divulgué en vertu de la Loi sur l'accès à l'information.

Photograph 1. Upstream isolation and by-pass pumping at the control structure within the pond habitat located south of 56 Avenue and east of 272 Street (September 20, 2005).



Photograph 2. Downstream isolation plate at the control structure within the pond habitat located south of 56 Avenue and east of 272 Street (September 20, 2005).

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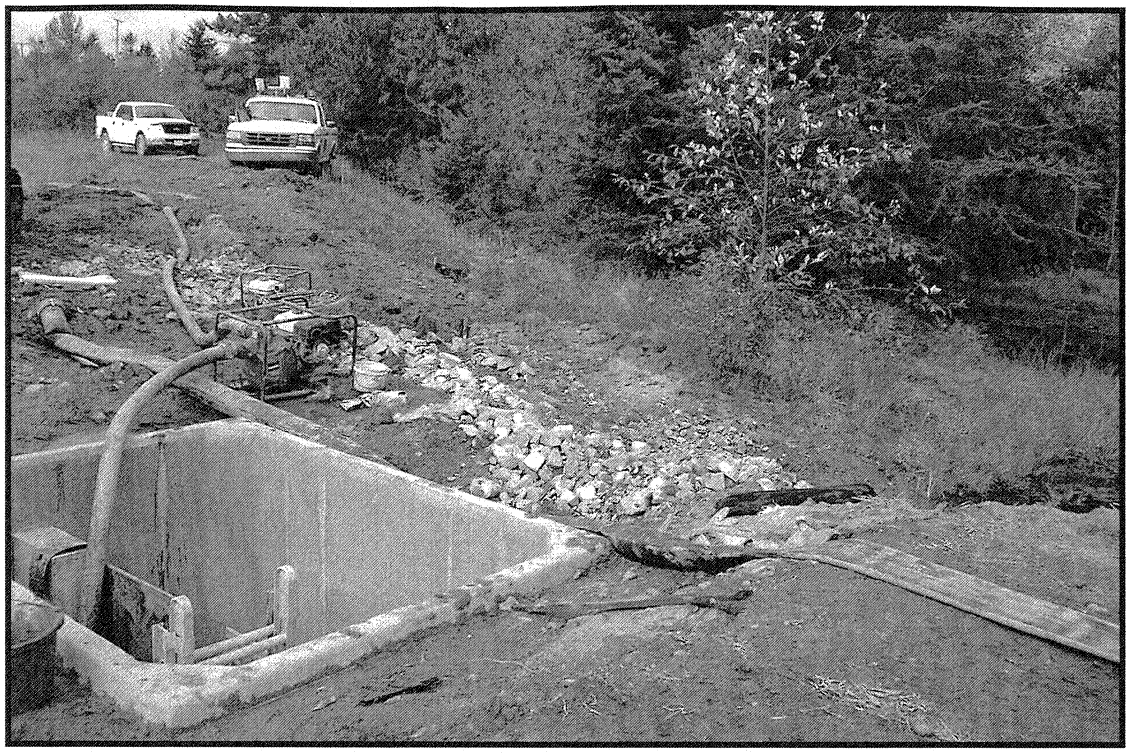

Photograph 3. De-watering of control structure chamber and discharge of water into adjacent isolated dry west pond (September 19, 2005).

Photograph 4. Completed channel connection at the eastern extent of the pond habitat located east of 272 Street (September 20, 2005).

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ATTACHMENT C

Gloucester Industrial Estates
Habitat Areas A Through E
Photographs

Document Released Under the Access to Information Act / Document divulgué en vertu de la Loi sur l'accès à l'information.

Photograph A1. Looking west at hydraulic channel adjacent to Hwy. No. 1; Habitat Area A, east west alignment (November 30, 2005).

Photograph A2. Looking north at constructed beaver dam within hydraulic channel; Habitat Area A, north south alignment (November 30, 2005).

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Photograph A3. Looking north at hydraulic channel; north south alignment (June 28, 2005).

Photograph B1. Looking north along west bank of storm water treatment pond; Habitat Area B (November 30, 2005).

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Photograph B2. Looking north at the storm water treatment pond; Habitat Area B (June 28, 2005).

Photograph B3. Looking northeast at storm water treatment pond; Habitat Area B (June 28, 2005).

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Photograph B4. Looking east at the north inlet channel to the storm water treatment pond; Habitat Area B (November 30, 2005).

Photograph B5. Looking west at beaver dam construction within the northwest inlet channel; Habitat Area B (June 28, 2005).

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Photograph C1. Looking north at wetland from Gloucester Way inlet headwall; Habitat Area C (June 28, 2005).

Photograph C2. Looking northwest at wetland from Gloucester Way inlet headwall; Habitat Area C (June 28, 2005).

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Photograph D1. Looking south at hydraulic channel from Gloucester Way headwall; Habitat Area D (June 28, 2005).

Photograph D2. Looking north at hydraulic channel from Goucester Way headwall; Habitat Area D (June 28, 2005).

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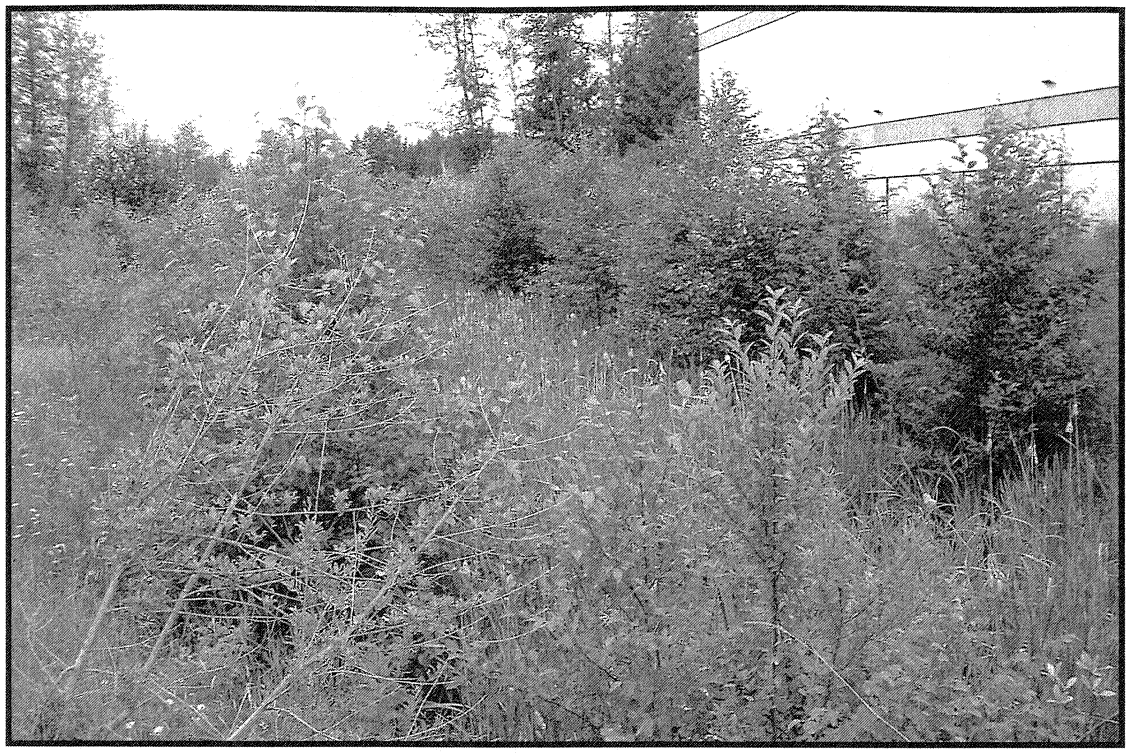

Photograph D3. Looking north from Gloucester Way towards the first flush treatment wetland; Habitat Area D (June 28, 2005).

Photograph E1. Looking north from east bank of south pond; Habitat Area E (June 28, 2005).

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Photograph E2. Looking west from east bank of north pond; Habitat Area E (June 28, 2005).

Photograph E3. Looking south from the southeast bank of the north pond; Habitat Area E (June 28, 2005).

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ATTACHMENT D

Gloucester Industrial Estates
Authorization Document

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HABITAT & ENHANCEMENT BRANCH
AUG - 9 2004
LOWER FRASER AREA

RECEIVED
AUG 2 2004

AMENDMENT

to

DFO AUTHORIZATION NO: 99-HPAC-PA2-000-000217

AUTHORIZATION FOR WORKS OR UNDERTAKINGS AFFECTING FISH HABITAT

Authorization Amendment issued to:

Name:	161884 Canada Inc.: Gloucester Industrial Estates (herein also referred to as 'Gloucester')
Address:	310 – 1001 West Broadway Vancouver, B.C. VV6H 4B1
Contact:	[redacted]
Telephone No.:	604 856-3156
Facsimile No.:	604 856-3384

s.19(1)

Location of Project:

Tributaries to West and Nathan Creeks within Gloucester Industrial Estates in Langley, generally encompassing lands north of the Trans-Canada Highway, west of the Langley-Abbotsford boundary, east of 264th and south of 60th Avenue.

Amended Valid Authorization Period:

The valid authorization period for the harmful alteration associated with the works to be extended to **September 30, 2008**.

Amended Conditions of Authorization:

1. Under Authorization 99-HPAC-PA2-000-000217 the detention area located on the east side of 272 Street south of 64th Avenue was also slated for development of a golf course; golf course detention facilities configuration details were to be worked out with the developer for the site. However, due to lack of interest in its development as a golf course, Gloucester has requested planning revision to Langley's OCP to remove the required golf course from the accepted plans. Since detention is imminently required with continued development of lands outside of the golf course area, Gloucester proposes

AUG 0 5 2004

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construction of an 'Interim Detention Pond' in 2004, between 1 August 2004 and 30 September 2004.

2. The 'Interim Detention Pond' will be constructed as shown on Aplin and Martin Design Drawing Nos. 24066-01 through -06, including:
    a. The construction of a permanent berm;
    b. The construction of a flow control structure within the hydraulic channel of West Creek at the berm crossing of the creek;
    c. The excavation of lands on either side of the creek and landward of the 15m no disturbance zone;
    d. Removal to two (2) existing sediment ponds and construction of a temporary storm water drainage ditch; and,
    e. Riparian planting along the berm slope and hydro-seeding of all disturbed areas.
3. The amended conditions of Authorization shall be consistent with the application for amendment submitted to DFO from ECL Envirowest Environmental Consultants, dated 19 July 2004, entitled "Gloucester Industrial Estates, Township of Langley".

All other conditions associated with Authorization Number 99-HPAC-PA2-000-000217 shall remain as per the original Authorization document, signed by 161884 Canada Inc., 24 August 2000 and by DFO on 29 August 2004.

The terms and conditions of the Authorization Amendment withstanding, Fisheries and Oceans Canada (DFO) may at any time and at their sole discretion acting reasonably direct, Gloucester and their consultant, agents or contractors, to suspend or alter works and activities associated with this project.

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Amendment to Authorization 99-HPAC-PA2-000-000217

The holder of this Authorization Amendment is hereby authorized under the authority of section 35(2) of the Fisheries Act, R.S.C., 1985, c. F. 14, to carry out the work or undertaking described herein.

This Authorization Amendment is valid only with respect to fish habitat and for no other purposes. It does not purport to release the applicant from any obligation to obtain permission from or to comply with the requirements of any other regulatory agencies.

Failure to comply with any condition of this Authorization Amendment may result in charges under the Fisheries Act.

This Authorization Amendment should be attached to Authorization 99-HPAC-PA2-000-000217 and held on site and work crews should be made familiar with the conditions of this Authorization Amendment.

Date of issuance:

Approved by: _____
for Dale Paterson

Title: Area Chief, Lower Fraser River Division Habitat Unit
Habitat and Enhancement Branch
Lower Fraser Area, Fisheries and Oceans Canada

161884 Canada Inc.: Gloucester Industrial Estates acknowledges that DFO has consulted with them regarding the terms of this Authorization Amendment, and confirms that they have reviewed and understand the terms of this Authorization Amendment, and they will comply with them.

Executed by an authorized signatory of 161884 Canada Inc.: Gloucester Industrial Estates on the 6 day of August, 2004 in the presence of:

[redacted]

Title (Print)

161884 Canada Inc.: Gloucester Industrial Estates:

[redacted]

Title (Print)

s.19(1)

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BRITISH COLUMBIA

Ministry of Environment, Lands and Parks

BC Environment
Lower Mainland Region

FAX SHEET

s.19(1)

Date:	Friday, September 08, 2000	Total # of pages	1
To:	[redacted]	Fax #	(604) 451-0557
Office:	ECL Envirowest Consultants	Phone #	(604) 451-0505
From:	**Jean Cook, *Habitat Officer***	Phone #	(604) 582-5235
	Project Review Coordination Group BC Environment, Lower Mainland Region Ministry of Environment, Lands and Parks	Fax #	(604) 582-5305

A2004880 – ECL for Gloucester Industrial Estates, Proposed setback relaxation, and realignment &/or elimination of various tributaries to West Creek and Nathan Creek in the NE Quadrant, SE Quadrant and SW Quadrant of the development in Langley, submission, dated June 8, 1999.

I have discussed the project with Narinder Singh of Water Management and he advises that he has no objection to the works proceeding prior to receipt of the formal Water Act approval, subject to adherence to the requirements listed below, and compliance with all terms and conditions of the Section 35(2) Authorization #99-HPAC-PA2-000-000217, dated August 29, 2000.

As discussed in our August 28th telephone conversation, here are the specific comments from John Summers -

- all exposed soils must be hydroseeded prior to Sept. 30th;
- a preconstruction meeting must be held, to discuss sediment control, and outlining what can and cannot be cleared next to watercourses, as well as all approval details; and
- the monitor must monitor water levels. If, at any time, TSS exceeds 75mg/l, all work must cease with the exception of sediment, erosion and runoff control implementation.

Also, please provide a copy of the following information requested in the Section 35(2) Authorization, when available, to the undersigned –

- a copy of the written authority requested in Condition #5;
- a copy of the fish and amphibian salvage results requested in Condition #9;
- two copies of the summary monitoring report with requirements stipulated in Condition #19; and
- two copies of the monitoring reports with requirements stipulated in Condition #32.

Narinder advises that the formal Water Act approval will follow at a later date.

Thanks,

Jean A. Cook, *Habitat Officer*
Project Review Coordination Group

c.c. [redacted] Gloucester Industrial Estates – Fax #856-3384

URGENT: NO CONFIDENTIAL: NO ORIG. IN MAIL: NO

Material contained in this fax transmission may be confidential, and should only be delivered to the addressee. If you do not receive all pages, please call 582-5235.

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March 1, 2007

Fisheries and Oceans Canada
Habitat and Enhancement Branch
Unit 3 - 100 Annacis Parkway
Delta, BC
V3M 6A2

DFO File No. 99-HPAC-PA2-000-000217

Attn.: Mr. Alan Jonsson

RE: GLOUCESTER INDUSTRIAL ESTATES, LANGLEY
Post-Construction Habitat Monitoring, Year 5

ECL Envirowest Consultants Limited (Envirowest) has prepared the following environmental monitoring report for the annual post-construction monitoring program associated with the above-referenced project. The report addresses Conditions Nos. 19 and 32 (a) through (i) of the Subsection 35(2) federal Fisheries Act Authorization No. 99-HPAC-PA2-000-000217 for instream works and post construction monitoring. The report represents the fifth and final year of post construction monitoring for Habitat Areas A through E constructed during 1997, 2000, and 2001.

s.19(1)

Please contact me at 604-451-0505 or [redacted] if you have any comments or questions regarding this report.

[redacted] **ANTS LIMITED**

HABITAT & ENHANCEMENT BRANCH
MAR - 6 2007
LOWER FRASER AREA

Copy: Mr. Mike Willcox
[redacted]
Ministry of Water, Land and Air Protection
Gloucester Industrial Estates
ECL Envirowest Consultants Limited

5300-02-L-00-
99-28
CFS

ECL ENVIROWEST CONSULTANTS LIMITED
Suite 130 - 3700 North Fraser Way
Burnaby, B.C. V5J 5J4
voice: (604) 451-0505
facsimile: (604) 451-0557
www.ecl-envirowest.bc.ca

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GLOUCESTER INDUSTRIAL ESTATES, LANGLEY, BC

CONSTRUCTION AND POST CONSTRUCTION HABITAT MONITORING (2006)

Fisheries and Oceans Canada
Habitat and Enhancement Branch
100 Annacis Parkway
Delta, BC V3M 6A2

March 2007

HABITAT & ENHANCEMENT BRANCH
MAR - 6 2007
LOWER FRASER AREA

ECL ENVIROWEST CONSULTANTS LIMITED
Suite 130 - 3700 North Fraser Way
Burnaby, BC V5J 5J4
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GLOUCESTER INDUSTRIAL ESTATES, LANGLEY, BC

CONSTRUCTION AND POST CONSTRUCTION HABITAT MONITORING (2006)

Fisheries and Oceans Canada
Habitat and Enhancement Branch
100 Annacis Parkway
Delta, BC V3M 6A2

March 2007

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Burnaby, BC V5J 5J4
voice: 604-451-0505
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Report Citation: **ECL Envirowest Consultants Limited. 2006**. Gloucester Industrial Estates, Langley, BC - Construction and Post Construction Habitat Monitoring (2005). February 2006. *Report prepared for* Gloucester Industrial Estates, Langley, BC. 15 pages & attachments.

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1.0 INTRODUCTION

This report outlines the 2006 post construction monitoring program (Year 5) associated with Gloucester Industrial Estates. Section 2.0 of the report addresses Condition No. 32 (a) through (i) of the Subsection 35(2) federal Fisheries Act Authorization No. 99-HPAC-PA2-000-000217 (Authorization) for instream works.

The report represents the fifth and final year of post construction monitoring for compensation habitats constructed in 1997, 2000, and 2001 in association with the development of Gloucester Industrial Estates. Habitat locations are identified in Attachment A (Figure 1). Photographic, water quality, fish sampling, and invertebrate sampling stations are also identified in Attachment A (Figures 2 through 4). Photographs of the habitat areas are presented in Attachment B; Attachment C includes the Fisheries Authorization.

2.0 2006 POST CONSTRUCTION HABITAT MONITORING – HABITAT AREAS A, B, C, D & E

The following section summarizes the results of the 2006 post construction monitoring of mitigation/compensation and stormwater treatment habitats constructed in association with development of Gloucester Industrial Estates. This section of the report addresses Condition No. 32 (a) through (i) of the Authorization provided for development of Gloucester Industrial Estates. The 2006 monitoring year is the fifth and final year of post construction monitoring for the referenced habitats.

2.1 Introduction

As per requirements outlined in the Authorization, the monitoring program included assessments of channel stability, riparian vegetation, water quality (i.e. dissolved oxygen, pH, and temperature), channel flow velocity, and fish utilization. Water quality measurements, fish sampling, invertebrate sampling, assessment of physical stability, and flow velocity measurements were conducted on May 16, 2006 and January 10, 2007. Approximate locations of the constructed habitats and of the water quality, fish, and invertebrate sampling stations are included in Attachment A (Figures 1 through 4). Assessment methodology and results are presented in Sections 2.2 and 2.3, respectively.

2.2 Methodology

2.2.1 Physical Stability

Physical stability of the constructed habitats were assessed visually during each site visit. The stability assessment included, but was not limited to, documentation of tension cracks, erosion or

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scour points, movement of instream structures, bedload movement, slumping, sediment or debris accumulation, and/or sediment transport changes. Photographs depicting the constructed habitats are included in Attachment B.

2.2.2 Riparian Vegetation

The quantitative assessment of riparian shrubs and wetland plants within all habitat areas has been completed; a qualitative assessment, including visual observations of riparian shrub densities, plant species recruitment, wetland plant colonization, and the health/vigor of the riparian community was undertaken during each site visit.

2.2.3 Water Quality

In situ water quality analyses included measurements of pH, dissolved oxygen, and temperature. Water quality was analyzed using YSI 55 (dissolved oxygen, temperature), and Oakton pH Testr10 meters; both meters were calibrated prior to sampling in accordance with the manufacturer's recommended methods. Approximate locations of the water quality stations are identified in Attachment A (Figures 2 through 4).

2.2.4 Channel Flow Velocity

Channel flow velocity was measured within reconstructed channel habitats using a Gurley 622 current meter. The current meter is factory calibrated and does not require calibration prior to use. The meter was positioned in the centerline of the reconstructed channels to a depth of approximately 60 percent of total water depth.

2.2.5 Fish Utilization

Fish sampling was conducted using gee-type minnow traps baited with salmon roe. Traps were set and soaked for approximately 24 hours to assess fish utilization within the constructed habitats. Locations of fish sampling stations are included in Attachment A (Figures 2 through 4).

2.2.6 Invertebrate Sampling

Invertebrate sampling of riffle habitat (e.g. habitat areas A and D) was conducted on May 16, 2006 using a Surber sampler. Approximately 0.09 square metres (i.e. a single Surber kick sample) of riffle habitat was sampled from the hydraulic channels. Invertebrates were sorted, preserved in 10 percent formalin and, where possible, identified to the family level according to McCafferty[1] and Merritt and Cummins[2]. The approximate invertebrate density per square metre is determined by dividing the total number of invertebrates enumerated within the sampling area

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1 **McCafferty, W.P. 1981.** Aquatic Entomology: The Fishermen's and Ecologists' Illustrated Guide to Insects and Their Relatives. Jones and Bartlett Publishers, Inc. 448 pp.

2 **Merritt, R.W. and K.W. Cummins (eds). 1994.** An introduction to the aquatic insects of North America. Second edition. Kendall/Hunt Publishing Company. 722 pp.

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(i.e. 0.09 square metres). The locations of the invertebrate sampling stations are identified in Figures 2 and 4 (Attachment A). The United States Environmental Protection Agency (EPA) assigns regional values[3] to selective aquatic invertebrates, whereby 0 and 10 represent the lowest and highest tolerance for poor water quality, respectively. The Northwest Region Tolerance Values for the identified inverebrates are compared within each sample site. An invertebrate with a tolerance value of zero represents a low tolerance for poor water quality, indicating that water must be acceptable for sustained periods of time to ensure colonization by the respective invertebrate population. An invertebrate tolerance of ten represents a high tolerance for poor water quality, indicating that low water quality can persist and colonization by the respective invertebrate population can still occur. As such, the occurrence of invertebrate species with low tolerance values suggests infrequent periods of poor water quality within the sampled fish habitats.

2.3 Results and Discussion

The following summaries present results of the data collected during the 2006 monitoring period. Photo documentation of the constructed habitats is provided in Attachment B.

2.3.1 Habitat Area A

2.3.1.1 Physical Stability

During the 2006 monitoring period, the channel appeared stable; evidence of erosion, slumping, tension cracks, and instream structure movement was not noted. Minor debris accumulation and residual beaver dam material was evident within the hydraulic channel. Beaver activity is evident on the banks of the channel between Highway No. 1 and Gloucester Way (i.e. north south alignment).

2.3.1.2 Riparian Vegetation

Vegetation within Habitat A has developed into a viable riparian plant assemblage displaying vigorous growth and satisfactory plant density. Evidence of beaver foraging (e.g. fallen trees) was noted upon the banks of the channel; damming of the channel was not apparent during the assessments. Blackberry (*Rubus* spp.) was noted establishing along the channel banks; it does not appear to be problematic at this time.

2.3.1.3 Water Quality

Results from water quality assessments at stations WQ-A1 through WQ-A4 are summarized in Table 2.1 below. Dissolved oxygen concentrations ranged from 0.6 milligrams per litre (mg/L)

[3] **Barbour, M.T., J. Gerritsen, B.D. Snyder, and J.B. Stribling. 1999.** Rapid Bioassessment Protocols for Use in Wadeable Streams and Rivers: Periphyton, Benthic Macroinvertebrates, and Fish, Second Edition. U.S. Environmental Protection Agency, Office of Water, Washington, D.C.

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to 11.8 mg/L. Dissolved oxygen concentrations at three of the sampling locations (i.e. May sampling period) were below levels at which salmonids show initial distress symptoms (i.e. 6.0 mg/L)[4]; flows within the channel were sub-surface during the May site visit. The pH levels were within the range required to protect freshwater aquatic life (i.e. 6.5 - 9.0)[5]; pH values ranged from 7.2 to 8.0. Temperature ranged from 0.3 degrees Celsius (°C) to 17.6°C; these values are below lethal levels for salmonids (i.e. 20°C)[2].

Table 2.1 Water Quality Sampling Results – Habitat Area A

Sample Year, Date and Station			pH	Temp.[a] (°C)	D.O.[b] (mg/L)
Year 5	May 16, 2006	WQ-A1	7.2	10.9	3.69
		WQ-A2	7.2	17.6	6.28
		WQ-A3	7.5	17.6	5.20
		WQ-A4	7.3	11.3	0.6
	January 10, 2007	WQ-A1	8.0	0.3	10.46
		WQ-A2	8.0	0.3	11.18
		WQ-A3	7.5	0.3	11.8
		WQ-A4	7.6	0.3	10.26

[a] temperature
[b] dissolved oxygen

2.3.1.4 Channel Flow Velocity

Channel flow velocity was not measured due to insufficient water depth at the time of the site visits.

2.3.1.5 Fish Utilization

Threespine stickleback (*Gasterosteus aculeatus*), fathead minnow (*Pimephales promelas*), and northwestern salamander (*Ambystoma gracile*) were captured within Habitat Area A. Locations of fish sampling stations are included in Attachment A (Figure 2). Fish sampling results for the 2006 monitoring period are summarized below in Table 2.2.

4 **MacDonald, L.H., A.W. Smart and R.C. Wissmar. 1991.** Monitoring Guidelines to Evaluate Effects of Forestry Activities on Streams in the Pacific Northwest and Alaska. USEPA. 166 pp.

5 **Ministry of Water, Land, and Air protection. 1998.** British Columbia Approved Water Quality Guidelines (Criteria). Updated August 24, 2001.

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Table 2.2 Fish Sampling Results – Fish Habitat Area A			
Station	Fish Species[a]	Sample Year and Date	
		Year 5	
		May 16, 2006	January 10, 2007
FSS-A1	TSB	38	10
	FM	-	1
	NWS	-	1 (neotenic)
FSS-A2	TSB	2	15
FSS-A3	TSB	2	21
	NWS	1 (neotenic)	-
FSS-A4	TSB	45	1
FSS-A5	TSB	2	2
FSS-A6	TSB	-	1

[a] species codes TSB threespine stickleback (*Gasterosteus aculeatus*)
FM fathead minnow (*Pimephales promelas*)
NWS northwestern salamander (*Ambystoma gracile*)

2.3.1.6 Invertebrate Sampling

Results of invertebrate sampling are summarized below in Table 2.3. One hundred and one (101) organisms were identified; the greatest percentage belonged to the Class Oligochaeta.

The regional tolerance values for invertebrates identified within Habitat Area A range between 2 and 8. A tolerance value of 2 represents a low tolerance for poor water quality; although most of the organisms fall within the 8 tolerance value. This indicates periods of poor water quality within Habitat Area A.

Table 2. 3 Invertebrate Sampling Results – Habitat Area A		
Aquatic Invertebrate	Sample Station INV-A1	EPA RTV*
Class Oligochaeta	92	8
Class Insecta	-	-
Order Ephemeroptera	-	-
Family Leptophlebiidae	4	2
Class Crustacea	-	-
Order Amphipoda	-	-
Family Gammaridae	5	6
Total	101	-
Invertebrate Density/square metre	1,122	

* Environmental Protection Agency Regional Tolerance Value

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2.3.2 Habitat Area B

2.3.2.1 Physical Stability

Evidence of instability within the wetted perimeter of the pond was not noted. The western portion of the pond is being utilized by off-road enthusiasts', this is a habitual problem. Large woody debris within the pond appears stable; beaver activity (e.g. dams) and foraging on plant material was noted. Removal of beaver dams by maintenance crews is ongoing within the habitat area; removal of dams is undertaken to ensure hydraulic capacity is not compromised and drainage within the habitat area remains effective (i.e. avoid flooding). Beaver dam debris is removed with care to minimize impacts to lifeforms and habitat features (e.g. vegetation). The majority of beaver dam maintenance is undertaken during the fisheries work window (e.g. August) unless emergency works are required.

2.3.2.2 Riparian Vegetation

Riparian and wetland vegetation has flourished within Habitat Area B. Wetland plants have densely vegetated all suitable habitat areas. Riparian plant assemblages adjacent to ponds and watercourses have developed into a viable wildlife habitat; continual growth is anticipated in the future. Invasive plant species such as Scotch broom (*Cytisus scoparius*) and Himalayan blackberry (*Rubus discolor*) are evident but have not yet become problematic. In general, riparian and wetland vegetation is well established and is providing protective cover and food for wildlife as well as shade for constructed fish habitats.

2.3.2.3 Water Quality

Results from water quality assessments at stations WQ-B1 through WQ-B5 are summarized in Table 2.4 below. Dissolved oxygen concentrations during both sampling periods ranged from 8.65 mg/L to 17.29 mg/L, above levels at which salmonids show initial distress symptoms (i.e. 6.0 mg/L)[3]. The pH levels were within the range required to protect freshwater aquatic life (i.e. 6.5 - 9.0)[4]; pH values ranged from 7.0 to 8.8. Temperature ranged from 0.8°C to 22.0°C. Three of the temperature readings were not within lethal levels for salmonids (e.g. 20°C)[4].

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Table 2.4 Water Quality Sampling Results – Habitat Area B					
Sample Year, Date and Station			pH	Temp.[a] (°C)	D.O.[b] (mg/L)
Year 5	May 16, 2006	WQ-B1	7.9	15.5	10.86
		WQ-B2	7.9	20.9	11.05
		WQ-B3	7.8	22.0	8.98
		WQ-B4	8.2	18.4	14.80
		WQ-B5	8.8	20.1	17.29
	January 10, 2007	WQ-B1	7.0	1.8	10.04
		WQ-B2	7.1	3.0	9.60
		WQ-B3	7.1	3.0	9.60
		WQ-B4	7.4	0.8	8.65
		WQ-B5	7.3	1.4	8.70

[a] temperature
[b] dissolved oxygen

2.3.2.4 Channel Flow Velocity

Channel flow velocity was not measured within Habitat Area B due to insufficient water depth.

2.3.2.5 Fish Utilization

Largemouth bass (*Micropterus salmoides*), threespine stickleback and northwestern salamander were captured within Habitat Area B. Evidence of anglers utilizing the ponds (e.g. fishing line and a lure on the bank) was noted. Locations of fish sampling stations are included in Attachment A (Figure 3). Fish sampling results for the 2006 monitoring period are summarized below in Table 2.5.

Table 2.5 Fish Sampling Results – Fish Habitat Area B			
Station	Fish Species[a]	Sample Year and Date	
		Year 5	
		May 16, 2006	January 10, 2007
FSS-B1	TSB	42	2
FSS-B2	No Capture	-	-
FSS-B3	LMB	-	1
FSS-B4	TSB	20	6
	NWS	-	1 (neotenic)
FSS-B5	TSB	40	-
	NWS	1 (neotenic)	-

[a] species codes
TSB threespine stickleback (*Gasterosteus aculeatus*)
LMB largemouth bass (*Micropterus salmoides*)
NWS northwestern salamander (*Ambystoma gracile*)

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2.3.2.6 Invertebrate Sampling

Invertebrate sampling was not undertaken within Habitat Area B.

2.3.3 Habitat Area C

2.3.3.1 Physical Stability

Evidence of instability was not noted within Habitat Area C; the west first flush treatment wetland appears to be stable and functioning as intended.

2.3.3.2 Riparian Vegetation

Riparian vegetation located on the lower slopes and within wetland berms is dense and vigorous. The woody plant assemblage within Habitat Area C is dominated by red alder (*Alnus rubra*), willow (*Salix* spp.), and hardhack (*Spiraea douglasii*). Aquatic plant material has densely vegetated the west first flush treatment wetland and adjacent channel; cattail (*Typha latifolia*) is the dominant wetland plant species. Invasive plant species (e.g. blackberry and scotch broom) do not appear to be problematic within Habitat Area C at this time.

2.3.3.3 Water Quality

Results from water quality assessments at stations WQ-C1 and WQ-C2 are summarized in Table 2.6 below. Dissolved oxygen concentrations during both sampling periods ranged from 6.00 mg/L to 9.03 mg/L, above levels at which salmonids show initial distress symptoms[3] (i.e. 6.0 mg/L). The pH levels were within the range required to protect freshwater aquatic life (i.e. 6.5 - 9.0)[4]; pH values ranged from 7.2 to 7.7. Temperature ranged from 4.3°C to 17.3°C; these values are below lethal levels for salmonids[2].

Table 2.6 Water Quality Sampling Results – Habitat Area C

Sample Year, Date and Station			pH	Temp.[a] (°C)	D.O.[b] (mg/L)
Year 5	May 16, 2006	WQ-C1	7.7	16.6	7.66
		WQ-C2	7.6	17.3	6.00
	January 10, 2007	WQ-C1	7.5	4.3	9.03
		WQ-C2	7.2	4.3	8.20

[a] temperature
[b] dissolved Oxygen

2.3.3.4 Channel Flow Velocity

Channel flow velocity was not measured due to insufficient water depth at the time of the site visits.

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2.3.3.5 Fish Utilization

Threespine stickleback and northwestern salamander were captured within Habitat Area C. Locations of fish sampling stations are included in Attachment A (Figure 3). Fish sampling results for the 2006 monitoring period are summarized below in Table 2.7.

Table 2.7 Fish Sampling Results – Fish Habitat Area C

Station	Fish Species[a]	Sample Year and Date	
		Year 5 (2006)	
		May 16, 2006	January 10, 2007
FSS-C1	TSB	50	35
FSS-C2	TSB	48	18
	NWS	-	3 (neotenic)

[a] species code TSB threespine stickleback (*Gasterosteus aculeatus*)
NWS northwestern salamander (*Ambystoma gracile*)

2.3.4 Habitat Area D

2.3.4.1 Physical Stability

The east first flush treatment wetland and realigned channel appear stable; evidence of bank failures were not noted. Large organic debris located throughout Habitat D appear stable; evidence of movement was not noted. Minor debris accumulation was noted at the outlet of the pond, immediately downstream of Gloucester Way. The debris was primarily small diameter branches caught in dense instream grasses and cattail. Channel substrates (i.e. cobbles and gravels) have migrated to downstream portions of the channel and into the ponds; clay has been exposed within upper channel sections.

2.3.4.2 Riparian Vegetation

A diverse plant assemblage has established along the total length of the watercourse within Habitat Area D. Riparian plant material is displaying satisfactory growth throughout the habitat; plant species located on the lower slope (e.g. close to the watercourse) are displaying greater vigor. Recruitment of red alder within this area has been strong, providing shade and leaf litter to the watercourse. Cattail is the dominant wetland species adjacent to pond edges and within channel and wetland areas.

Damaged riparian vegetation (e.g. cedar trees) were noted within the southwest portion of Habitat Area D; the developer of the adjacent lot (Lot 210) is responsible for the damage. Gloucester Industrial Estates was informed of the incident and will address the issue by installing replacement plant material and fencing.

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2.3.4.3 Water Quality

Results from water quality assessments at stations WQ-D1 and WQ-D2 are summarized in Table 2.8 below. Dissolved oxygen concentrations during both sampling periods ranged from 3.20 mg/L to 9.75 mg/L, above levels at which salmonids show initial distress symptoms (i.e. 6.0 mg/L)[3]. The pH levels were within the range required to protect freshwater aquatic life (i.e. 6.5 - 9.0)[4]; pH values ranged from 7.4 to 7.6. Temperature ranged from 0.3°C to 16.9°C; these values are below the lethal levels for salmonids[2].

Table 2.8 Water Quality Sampling Results – Habitat Area D

Sample Year, Date and Station			pH	Temp.[a] (°C)	D.O.[b] (mg/L)
Year 5	May 16, 2006	WQ-D1	7.5	15.1	5.61
		WQ-D2	7.6	16.9	3.20
	January 10, 2007	WQ-D1	7.4	0.3	9.75
		WQ-D2	7.6	1.6	8.85

[a] temperature
[b] dissolved oxygen

2.3.4.4 Channel Flow Velocity

Channel flow velocity was not measured due to insufficient water depth at the time of the site visits.

2.3.4.5 Fish Utilization

Threespine stickleback, northwestern salamander, and crayfish (*Pacifasticus leniusculus*) were captured within Habitat Area D. Locations of fish sampling stations are included in Attachment A (Figure 4). Fish sampling results for the 2006 monitoring period are summarized in Table 2.9.

Table 2.9 Fish Sampling Results – Fish Habitat Area D

Station	Fish Species[a]	Sample Year and Date	
		Year 5 (2006)	
		May 16, 2006	January 10, 2007
FSS-D1	TSB	24	35
	NWS	-	1
FSS-D2	TSB	28	25
	crayfish	1	-
FSS-D3	TSB	35	23
FSS-D4	TSB	42	22
	NWS	-	1 (neotenic)

[a] Species codes TSB threespine stickleback (*Gasterosteus aculeatus*)
NWS northwestern salamander (*Ambystoma gracile*)
crayfish (*Pacifasticus leniusculus*)

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2.3.4.6 Invertebrate Sampling

Results of invertebrate sampling are summarized below in Table 2.10. One hundred and sixty-four (164) organisms were identified; the greatest percentage belonged to the Class Oligochaeta.

The regional tolerance values for invertebrates identified within Habitat Area D range between 6 and 10. A tolerance value of 6 represents a moderate tolerance for poor water quality. All sampled organisms have a 6 or higher tolerance value. This indicates periods of poor water quality within Habitat Area D.

Table 2. 10 Invertebrate Sampling Results – Habitat Area D

Aquatic Invertebrate	Sample Station INV-D1	EPA RTV*
Class Oligochaeta	151	8
Class Hirudinea	2	10
Class Crustacea	-	-
Order Amphipoda	-	-
Family Gammaridae	4	6
Class Gastropoda	7	7
Total	164	-
Invertebrate Density/square metre	1,822	

* Environmental Protection Agency Regional Tolerance Value

2.3.5 Habitat Area E

2.3.5.1 Physical Stability

Both ponds appeared stable; woody debris located within the habitat area appeared to be structurally sound. The channel between the ponds was overgrown with plant material and water movement was noted to be subsurface or non-existent during the site visits. Evidence of erosion, slumping and tension cracks was not noted within Habitat Area E.

2.3.5.2 Riparian Vegetation

Riparian and wetland plant material within Habitat Area E appear vigorous and have established into a viable plant assemblage. Red alder recruitment has been substantial adjacent to the ponds.

2.3.5.3 Water Quality

Results from water quality assessments at stations WQ-E1 and WQ-E2 are summarized in Table 2.11 below. Dissolved oxygen concentrations during the May 16, 2006 sampling period ranged from 4.64 mg/L to 7.80 mg/L. Dissolved oxygen concentrations during the January 10, 2007 sampling period ranged from 7.64 mg/L to 7.95 mg/L. Dissolved oxygen levels were above

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those at which salmonids show initial distress symptoms[3] during both site visits. The pH levels were within the range required to protect freshwater aquatic life (i.e. 6.5 - 9.0)[4]; pH values ranged from 6.8 to 7.7. Temperature ranged from 1.3°C to 18.6°C; these values are below the lethal levels for salmonids[2].

Table 2.11 Water Quality Sampling Results – Habitat Area E

Sample Year, Date and Station			pH	Temp.[a] (°C)	D.O.[b] (mg/L)
Year 5	May 16, 2006	WQ-E1	7.4	17.3	7.80
		WQ-E2	7.0	18.6	4.64
	January 10, 2007	WQ-E1	7.7	1.3	7.95
		WQ-E2	6.8	1.3	7.64

[a] temperature
[b] dissolved oxygen

2.3.5.4 Channel Flow Velocity

Channel flow velocity was not measured due to insufficient water depth at the time of the site visits.

2.3.5.5 Fish Utilization

Fish were not captured within either pond; two northwestern salamander (neotenic) were captured during the January site visit.

2.3.5.6 Invertebrate Sampling

Invertebrate sampling was not undertaken within Habitat Area E; although numerous caddis fly (Order Trichoptera) larvae and nominal damselfly and dragonfly larvae (Order Odonata) were captured within minnow traps.

2.4 Summary of Post Construction Monitoring

Results obtained during the 2006 post-construction monitoring period indicate that:

- there are no stability concerns within the habitat areas. All installed woody debris remains anchored and stable. Accumulated debris noted within watercourses does not appear to be problematic; beaver dams are an on-going problem within the habitat areas. Beaver dam removal is undertaken as required to maintain hydraulic capacity and to avoid compromising the storm water management plan for Gloucester Industrial Estates;

- riparian vegetation within all five habitat areas display dense foliage and vigorous growth. Wetland species appear to be flourishing and functioning as intended. Further planting is not required within the habitat areas with the exception of minor mitigation planting within the

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southwest portion of Habitat Area D. Plant assemblages fulfill the requirements/specifications of the landscape design and Section 32(d) of the Authorization;

- dissolved oxygen levels measured at some locations during the May sampling session were below levels at which salmonids show initial distress symptoms. Other water quality parameters (i.e. pH and temperature) measured during the May and January sampling sessions were within the accepted ranges for salmonid presence. Water temperature and conveyance of flows during the summer months may be problematic for the survivorship of salmonids although downstream migration to more suitable habitat is possible;

- channel flow velocity was not measured during the 2006 monitoring period due to low flows. Channel flow velocities recorded during the November 30, 2005 sampling session measured 0.239 m/s within Habitat Area A and 0.278 m/s within Habitat Area D;

- salmonids were not captured within any of the Habitat Areas during the 2006 monitoring period. Coho salmon (*Oncohynchus kisutch*) and Cutthroat trout (*O. clarkii clarkii*) have previously been captured within the habitat areas;

- threespine stickleback and fathead minnow were captured within Habitat Areas A through D. Largemouth bass were captured within Habitat Area B and northwestern salamanders were captured within all Habitat Areas. It is evident that sport fisherman are utilizing the ponds within Habitat Area B;

- wildlife species observed throughout the 5 year monitoring program include: deer (Family Cervidae); rabbit (Family Leporidae); numerous bird species (birds of prey, waterfowl, perching (passerine), long-legged wading, land (nonpasserine), and seabirds); raccoon (*Procyon lotor*); squirrel (*Sciurus carolinensis*); coyote (*Canis latrans*) (i.e. adults and pups); rough-skin newt and frogs (Order Anura). Evidence of habitat utilization by mole (Family Talpidae) (i.e. surface soil mounds), and beaver (*Castor canadensis*) (i.e. dams and foraging activity) were also noted; and

- invertebrate sampling was undertaken within Habitat Areas A and D during the May 2006 sampling session. A total of 265 organisms were counted and identified; the greatest percentage of organisms belonging to the Class Oligochaeta. The average invertebrate density per square metre is approximately 1,472 organisms. Caddis fly, damselfly, and dragonfly larvae were captured within Habitat Area E throughout the five year monitoring program.

This report details post construction monitoring of habitats constructed in association with Gloucester Industrial Estates. The report addresses Condition #32 (a) through (i) of the Subsection 35(2) federal Fisheries Act Authorization No. 99-HPAC-PA2-000-000217. Section 2.0 of the report outlines monitoring conducted during the fifth and final year (2006) of post construction monitoring for all Habitat Areas.

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Gloucester Industrial Estates is in compliance with approval conditions and has been diligent and progressive with management of the habitat areas; maintenance has been undertaken over the duration of the monitoring program (e.g. augment planting, beaver dam removal, etc.). Envirowest is satisfied following completion of the above referenced recommendations (e.g. mitigation at Habitat Area D) that Habitat Areas A through E meet design specifications and appear to be developing into viable fish/wildlife habitat.

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ATTACHMENT A

Gloucester Industrial Estates
Site Map and Monitoring Stations
Figures 1 Through 4

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SITE MAP
SCALE 1:5000

REFERENCE DRAWING
File: SITE-3A.GLO. "Co-Operators at Gloucester Industrial Estates Concept Plan".
April 15, 1999. Isaak, Osman & Associates.

GLOUCESTER INDUSTRIAL ESTATES
Langley, BC

POST CONSTRUCTION HABITAT MONITORING

envirowest
ENVIRONMENTAL CONSULTANTS
ECL ENVIROWEST CONSULTANTS LIMITED
Suite 130 - 3700 North Fraser Way
Burnaby, B.C. V5J 5J4
www.ecl-envirowest.bc.ca
voice: 604-451-0505
facsimile: 604-451-0557

SITE MAP

DESIGN:	DRAWN:	CHECKED:	REVISION:	REVISION DATE:
PJW	SDJ	RWS	00	
SCALE: As Shown			DRAWING NUMBER:	
DATE: January 2007			FIGURE 1	

SHEET 1 OF 4

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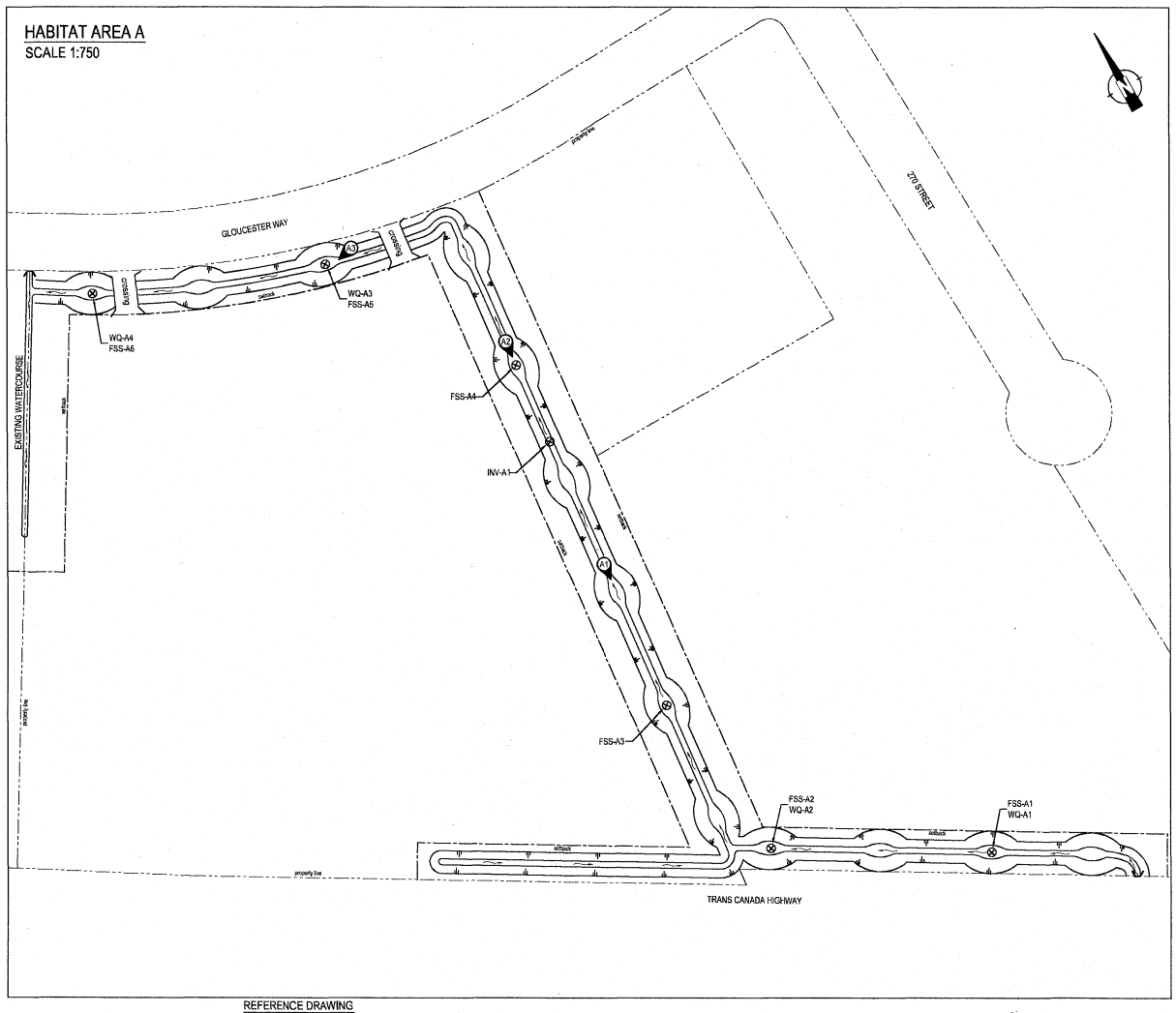
HABITAT AREA A
SCALE 1:750



REFERENCE DRAWING
File: SITE-3A.GLO. "Co-Operators at Gloucester Industrial Estates Concept Plan".
April 15, 1999. Isaak, Osman & Associates.

LEGEND

WQ	Water Quality Station
FSS	Fish Sampling Station
INV	Invertebrate Sampling Station
A1	Photograph (Direction Indicated by Arrow)

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Langley, BC

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MONITORING STATIONS

DESIGN:	DRAWN:	CHECKED:	REVISION:	REVISION DATE:
PJW	SDJ	RWS	00	
SCALE: As Shown			DRAWING NUMBER:	
DATE: January 2007			FIGURE 2	
			SHEET 2 OF 4	

000213

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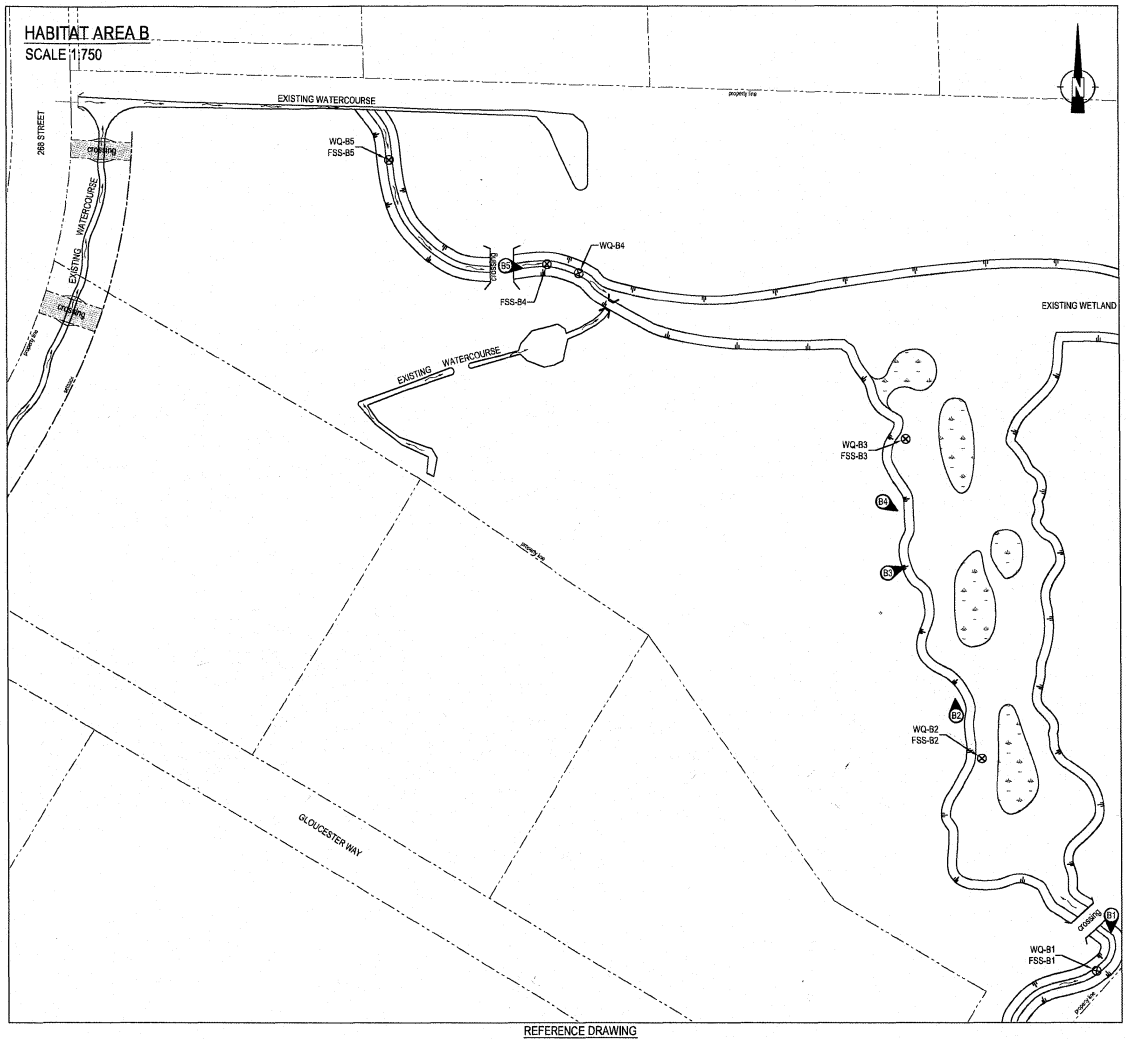

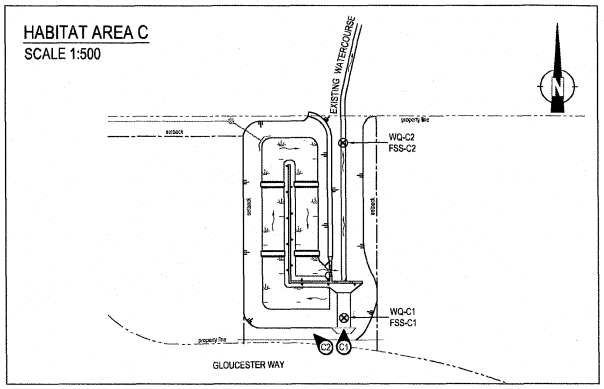

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MONITORING STATIONS

DESIGN:	DRAWN:	CHECKED:	REVISION:	REVISION DATE:
PJW	SDJ	RWS	00	
SCALE: As Shown			DRAWING NUMBER: FIGURE 3	
DATE: January 2007			SHEET 3 OF 4	

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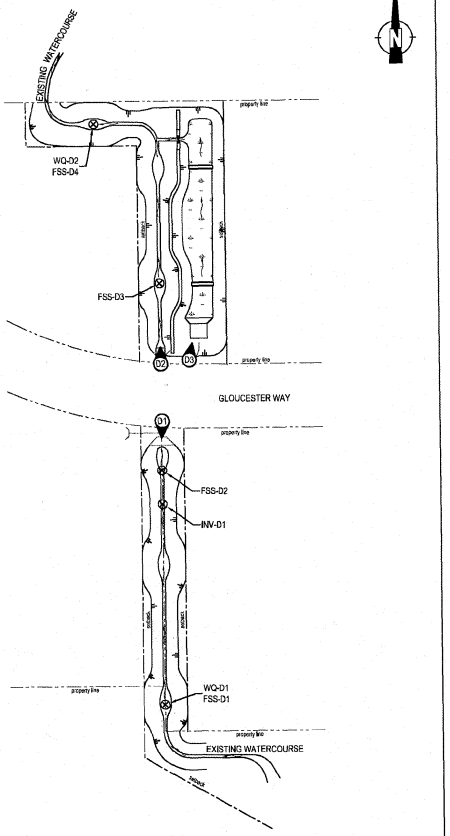
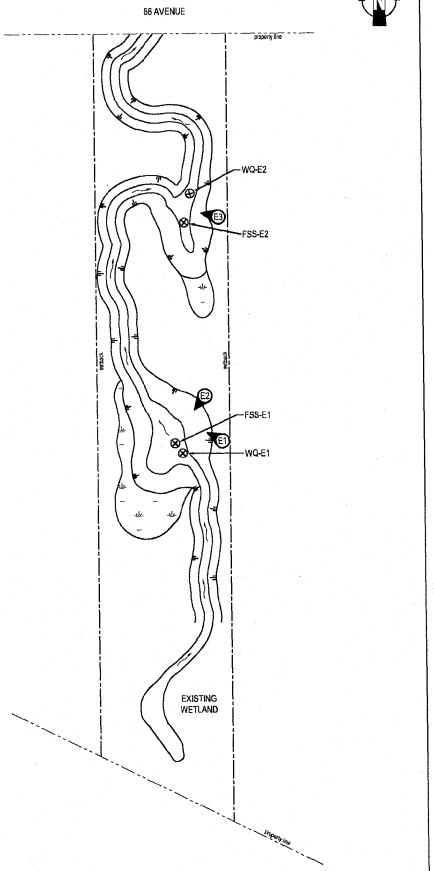
HABITAT AREA D
SCALE 1:750



HABITAT AREA E
SCALE 1:500



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File: SITE-3A.GLO. "Co-Operators at Gloucester Industrial Estates Concept Plan".
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FSS	Fish Sampling Station
INV	Invertebrate Sampling Station
A1	Photograph (Direction Indicated by Arrow)

GLOUCESTER INDUSTRIAL ESTATES
Langley, BC

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MONITORING STATIONS

DESIGN:	DRAWN:	CHECKED:	REVISION:	REVISION DATE:
PJW	SDJ	RWS	00	
SCALE: As Shown			DRAWING NUMBER:	
DATE: January 2007			FIGURE 4	
			SHEET 4 OF 4	

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ATTACHMENT B

Gloucester Industrial Estates
Habitat Areas A Through E
Photographs

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Photograph A1. Looking south at hydraulic channel; Habitat Area A, north south alignment (January 15, 2007).

Photograph A2 Looking south at hydraulic channel; Habitat Area A, north south alignment (May 17, 2006).

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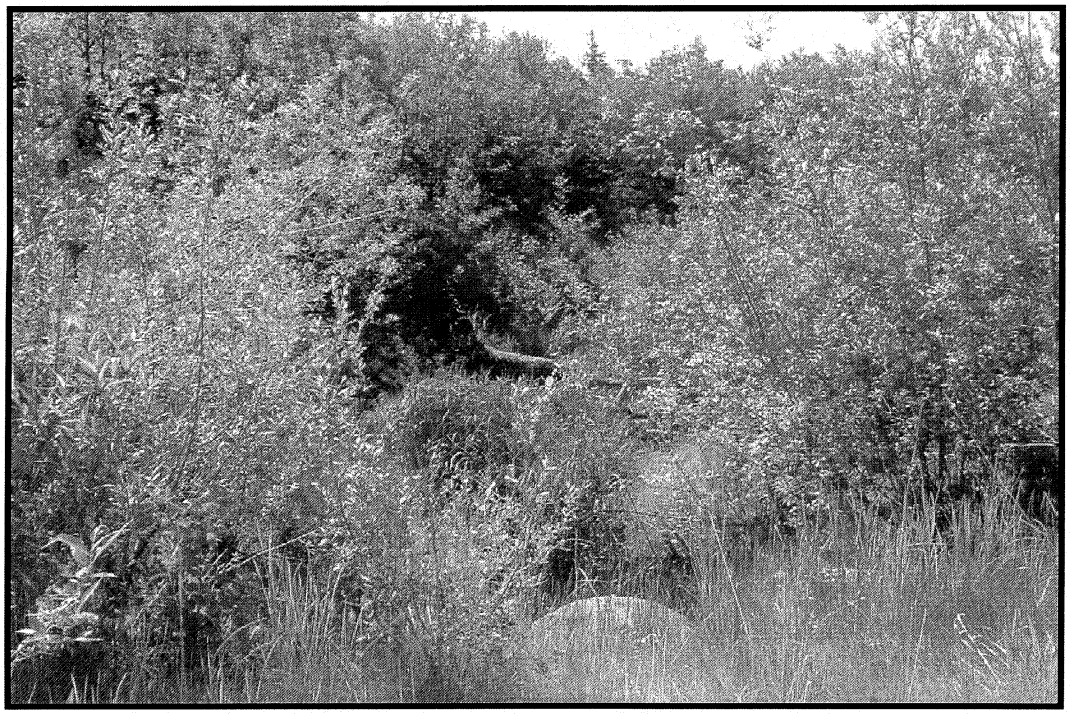
Photograph A3. Looking southwest at hydraulic channel; Habitat Area A, east west alignment adjacent to Gloucester Way (May 17, 2006).



Photograph B1. Looking south from culvert crossing southeast portion of Habitat Area B (May 17, 2006).

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Photograph B2. Looking north at the storm water treatment pond riparian plant material; Habitat Area B (May 17, 2006).

Photograph B3. Looking southeast at storm water treatment pond wetland plant material; Habitat Area B (May 17, 2006).

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Photograph B4. Looking southeast at the pond; Habitat Area B (May 17, 2006).

Photograph B5. Looking east at the north inlet channel to the storm water treatment pond; Habitat Area B (May 17, 2006)

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Photograph C1. Looking north at wetland from Gloucester Way inlet headwall; Habitat Area C (May 17, 2006).

Photograph C2. Looking northwest at wetland from Gloucester Way inlet headwall; Habitat Area C (May 17, 2006).

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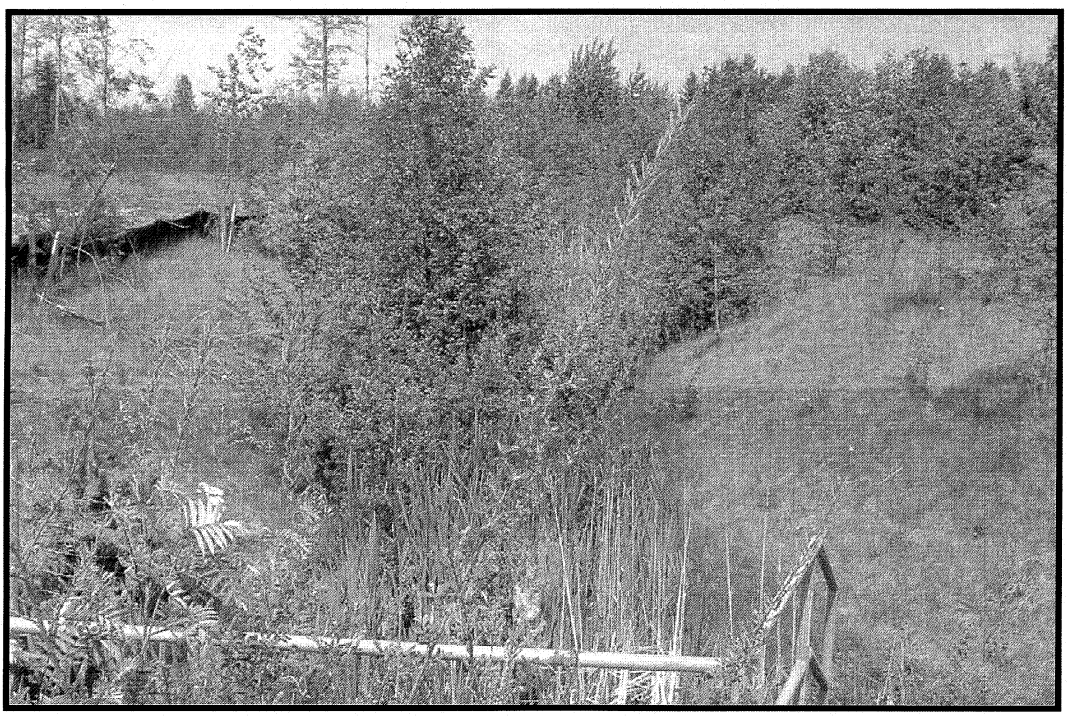
Photograph D1. Looking south at hydraulic channel from Gloucester Way headwall; Habitat Area D (May 17, 2006)



Photograph D2. Looking north at hydraulic channel from Gloucester Way headwall; Habitat Area D (May 17, 2006)

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Photograph D3. Looking northeast from Gloucester Way towards the first flush treatment wetland; Habitat Area D (May 17, 2006)

Photograph E1. Looking northwest from east bank of south pond; Habitat Area E. (May 17, 2006)

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Photograph E2. Looking west from east bank of north pond; Habitat Area E (May 17, 2006).

Photograph E3. Looking west from the east bank of the north pond; Habitat Area E (May 17, 2006).

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ATTACHMENT C
Gloucester Industrial Estates
Authorization Document

Pages 226 to / à 228

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pages 174 to / à 176

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Fisheries and Oceans / Pêches et Océans

Authorization # 99-HPAC-PA2-000-000217
MELP File #A2004880

AUTHORIZATION FOR WORKS OR UNDERTAKINGS AFFECTING FISH HABITAT

Authorization issued to:

Name: 161884 Canada Inc.: Gloucester Industrial Estates (herein also referred to as "Gloucester")

Address: 310 - 1001 West Broadway, Vancouver, BC V6H 4B1

s.19(1)

Contact: [redacted]

Telephone: (604) 856-3156

Facsimile No: (604) 856-3384

Location of Project:

Tributaries to West and Nathan creeks within the Gloucester Industrial Estates in Langley, generally encompassing lands north of the Trans-Canada Highway, west of the Langley-Abbotsford boundary, east of 264th Street and south of 60th Avenue.

Valid Authorization Period:

The valid authorization period for the harmful alteration associated with various land development activities is from 01 May, 2000 through 15 September, 2005.

As specified herein, this document only authorizes the destruction of the fish habitat and associated compensatory works until 15 September, 2005. If any phase of the project is not completed by that date, such that fish habitat may be affected, a new application pursuant to Section 35(2) of the Fisheries Act may be required. Should this Authorization expire without the works proceeding, and no alterations to the project design or DFO policy, legislation and/ or guidelines have occurred, an amendment for an extension to this authorization may be considered.

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Description of Works or Undertakings:

The harmful alteration hereby authorized includes a number of undertakings which are listed below and numerically referenced to a plan of existing drainage (refer to ECL Drawing No. 467-02-11, Rev. 03, attached in Appendix A).

In the Northeast Quadrant of the development -

Site 1. realignment and permanent elimination of riparian vegetation associated with the fisheries sensitive zone (i.e. relaxation of the setback boundary) adjacent to a watercourse;
Site 2. elimination of a watercourse; and,
Site 3. elimination of a ravine, elimination of a portion of a wetland, and permanent elimination of riparian vegetation associated with the fisheries sensitive zone (i.e. relaxation of the setback boundary) adjacent to a wetland.

In the Southeast Quadrant of the development -

Site 8. elimination of a watercourse;
Site 9. realignment of a watercourse;
Site 10. elimination of a watercourse; and,
Site 23. elimination of 5 m of watercourse.

In the Southwest Quadrant of the development -

Site 11. elimination of a watercourse;
Site 12. elimination of a watercourse;
Site 13. elimination of a pond;
Site 14. elimination of a pond;
Site 15. elimination of a pond;
Site 16. elimination of a pond and watercourse;
Site 17. realignment of a watercourse;
Site 18. elimination of a watercourse;
Site 19. elimination of a pond and watercourse;
Site 20. elimination of a pond;
Site 21. elimination of riparian vegetation; and,
Site 22. elimination of a watercourse.

These works are more specifically described in the following submissions and drawings:

Appendices:

a). Appendix A: ECL Envirowest Consultants Limited (ECL) Drawing No. 467-02-11, Revision 03 entitled "Existing Drainage" dated May 2000, and ECL Dwg No. 467-02-12, Revision 05 entitled "Ultimate Drainage", dated May 2000;

b). Appendix B: Habitat balance prepared by ECL;

c). Appendix C: The application for Environmental Review submitted by ECL on behalf of

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161884 Canada Inc., dated June 8, 1999;

d). Appendix D: ECL Drawing Nos.:
- 467-06-01R (dated March 1999);
- 467-02-09, Revision 00 (dated April 12, 1999);
- 467-04-06, Revision 01 (dated August 27, 1998);
- 467-02-08, Revision 01 (dated September 13, 1999);
- 467-02-10A, Revision 01 (dated August 9, 1999);
- 467-02-10B, Revision 01 (dated August 9, 1999);
- 467-02-13, Revision 00 (dated May 8, 2000);
- 467-02-14, Revision 00 (dated May 8, 2000);
- 467-02-15, Revision 00 (dated May 8, 2000);
- 467-02-16, Revision 00 (dated May 8, 2000);
- 467-02-17, Revision 00 (dated May 8, 2000).

e). Appendix E: Aplin & Martin Consultants Ltd. Drawing Nos. 96025SR-1, Revision 1; 96025SR-2, Revision 2; and 96025SR-3, Revision 2, all dated May 1997;

f). Appendix F: Hunter Laird Engineering Ltd. Job No. 4518, Sheets 9 of 14 and 10 of 14, both Revision A and dated July 29, 1999.

g). Appendix G: Copies of Letters of Credit totalling $100,000.00 and the Letter of Credit Reduction Schedule;

h). Appendix H: Copies of the restrictive covenant documents, registered in favour of the BC Ministry of Environment, Lands and Parks under Section 219 of the provincial Land Titles Act;

i). Appendix I: Gloucester Industrial Estates 1998 Stormwater Management Plan: Final Report by Stantec Consulting Ltd.

Schedules:

Schedule A: DFO/ MELP Riparian Planting Guidelines.

Conditions of Authorization:

1. Gloucester confirms that all plans and specifications relating to this Authorization have been duly prepared and reviewed by appropriate professionals working on behalf of Gloucester. Gloucester acknowledges that it is solely responsible for all design, safety and workmanship aspects of all of the works associated with this Authorization.

2. Gloucester confirms that the location and general design of the works are to be consistent with the information provided to the agencies and that any material deviations from such designs must be reviewed and approved by all agencies having jurisdiction in this matter.

3. The conditions of this Authorization notwithstanding, DFO may at any time and at their

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sole discretion, direct the Gloucester and/ or their agents and/ or contractors, to suspend or alter any work or activity associated with this project, to avoid or mitigate adverse impacts to fisheries resources. Further, DFO may at any time and at their sole discretion direct the Gloucester and/or their agents and/ or their contractors, to carry out at the Gloucester's own expense any works or activities deemed necessary by DFO to avoid or mitigate adverse impacts to fisheries resources.

4. DFO must be notified of any future modifications to the existing drawings referred to in this Authorization and upon notification, may require plans and specifications to review and/ or approve prior to any work commencing.

Conditions that relate to works in or near watercourses:

5. Instream works may only be undertaken during the period between 01 August and 15 September of any year of this development. Any extensions to the work window will be considered on a case by case basis (season and weather dependent) and must have approval for extension from DFO and/ or MELP. An environmental monitor must be present full time during all instream works, unless otherwise agreed to by DFO and/ or MELP. The environmental monitor must have the authority to alter or halt works should they feel the works are detrimental to fisheries resources. Gloucester must provide a copy of the written authority, providing the name of the environmental monitor, contact number and a brief outline of relevant experience related to the proposed works to DFO, MELP and the Township.

6. All other works within the fisheries sensitive zones (i.e. setback areas) must be monitored daily during construction and during or following any storm event which may occur during the construction phase.

7. The environmental monitor must have experience in stream construction or restoration as well as sediment and erosion control.

8. All instream work must be undertaken and completed in isolation of flowing water. Generally, this is accomplished by diverting, enclosing or pumping the water around the work site. Flow to downstream portions of the stream must not be cut off at any time during construction. In addition, the point of discharge to the creek must be located immediately downstream of the work site.

9. Prior to commencement of instream works, an environmental consultant or other qualified professional who is acceptable to DFO and/ or MELP must conduct a fish and amphibian salvage in and around areas potentially affected by siltation or de-watering. Appropriate fish collection permits must be obtained prior to any instream works commencing. The consultant/monitor must ensure that the appropriate DFO and MELP staff have been contacted and are advised of the commencement of instream works.

10. Sediment and erosion control measures must be installed to the standards outlined in the BC Environment/DFO "Land Development Guidelines for the Protection of Aquatic Habitat". All work must be conducted in a manner that will prevent the release of sediment or sediment-laden water into any watercourse.

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In this regard, a sediment, erosion and runoff control plan must be prepared by a qualified, trained professional and implemented prior to any site preparation works and/ or construction. These facilities must be maintained until the occupancy permit stage, or until no longer applicable to the site conditions. These facilities must be maintained and be working adequately to control discharges from the site.

11. All disturbed areas within the leavestrips should be hydro-seeded or covered to prevent surface erosion. If work is undertaken late in the growing season, normal seeding may not be effective in preventing surface erosion. In this regard, the entire disturbed area may require stabilization through hydro-seeding with heavy mulch or by installing geotextile seed mats.

12. All constructed streambank slopes must not exceed 2:1 slopes (horizontal: vertical). All constructed slopes must be covered with a minimum 6" topsoil to ensure a reasonable plant growth medium, and an appropriate native seed mixture and biodegradable geotextile or hydro-seed (if deemed necessary by a qualified professional) to ensure stability.

13. Riparian revegetation must be completed in accordance with the specified plans, attached in Appendix D. Any other disturbed areas within the leavestrip areas, which are not included in a specified revegetation plan, must be replanted in accordance with the DFO/ MELP guidelines for riparian revegetation, attached as Schedule A.

14. Machinery is not permitted to work within the wetted perimeter of the stream. All machinery on the site must be in good repair and free of excess oil and grease. No fuels lubricants, construction wastes or other deleterious substances may enter the watercourse at any time. Emergency spill kits must be kept on site and be readily accessible at all times in case of release of a deleterious substance to the environment. Any spill of reportable quantities must be immediately reported to the Provincial Emergency Program (24 hour phone line: 1-800-663-3456).

15. All construction materials, such as fill or riprap, must consist of inert materials. Rock used as riprap must be durable and suitably graded to resist movement by stream flow. Rock and/ or riprap placement must be completed so as to ensure their stability within the creek system.

16. Topsoil, debris from construction, concrete and/ or concrete leachate, overburden, soil, grout, oil, grease or any other substance deleterious to aquatic life must be disposed of or placed in a manner that will prevent their entry into any watercourse, ravine, floodplain, or storm sewer system.

    In this regard, DFO notes that if any cast in place concrete works are to be undertaken, there may exist high potential for concrete and/ or concrete leachate to enter a watercourse. Concrete leachate is alkaline and highly toxic to fish and aquatic life and DFO requires that measures be taken to prevent any incidence of concrete from entering the watercourse. In case of emergency, a concrete buffer, such as CO2, must be kept on site to mitigate any impacts from the escape of concrete. To ensure that no concrete or concrete leachate impacts downstream fish or fish habitat, DFO advises that the downstream pH be monitored regularly until completion of the works. If a significant change in pH is noted (i.e. pH below 5.0 or above 9.0), then emergency measures must

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be implemented to neutralize pH levels. In addition, any concrete that does escape must be cleaned out of the channel immediately. All concrete work must be carried out during dry weather and low water conditions.

17. Any future stream crossings must be clear span bridges, bottomless arch culverts, or oversized culverts with a minimum 300-mm depth of gravels throughout, unless otherwise approved by DFO and MELP. Approval for stream crossings will be considered on a site by site basis.

18. ***The following personnel must be contacted and advised of any instream works or works within the fisheries sensitive zone (i.e. setback areas), a minimum of five (5) days in advance of the commencement of works.*** In addition, DFO and/ or MELP must be contacted for site inspection for any relocated or constructed watercourses prior to the release of water into newly constructed habitat:

a) The Fishery Officer in charge of the Fraser Valley West Field Office at tel: (604) 607-4160 or fax: (604) 607-4199;
b) The DFO Habitat Biologist for the Langley area at tel: (604) 666-6310 or fax: (604) 666-6627 (current contact Suzanne Thorpe); and,
c) The MELP Fish and Wildlife Habitat Protection Officer for the Langley area at tel: (604) 582-5239 or fax: (604) 930-7119 (current contact John Summers).

19. For any 'individual' project completed within the specified time period, the environmental monitor must submit three (3) copies of a 'summary' monitoring report to MELP and one (1) to this Department within 90 days of project completion.

As described herein, Site numbers 1 through 23 represent 'individual' projects, as do each of the compensatory sites A through D; however, the sites may be listed and detailed within the same monitor's report, if undertaken within the same calendar year. The monitor's report must indicate that the project has been completed and shall include the following:

a) a complete list of all outstanding or incomplete works for any 'project' as defined herein;
b) date-stamped photos of the site(s) before, during and after construction;
c) date-stamped photos of the site post-planting;
d) confirmation of compliance with the Authorization; and,
e) details of any difficulties encountered and how they were handled.

20. In the event of any significant incident(s) which may occur during works associated with this project (i.e. oil/ gas spill, slope failure, sediment or erosion control problem), the environmental consultant should notify both DFO and MELP representatives as soon as possible. All emergency-reporting procedures must be followed on an immediate basis. The environmental monitor should have an emergency call out procedure in place prior to the commencement of works.

21. The environmental monitor must post a readily visible sign identifying their company name and telephone number at the entrance(s) to the site.

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22. ***A copy of this Authorization must be forwarded to all contractors and/or crew supervisors and must be present on the site while work is proceeding.***

23. ***It is understood that by proceeding with the works specified herein, the applicant's agent(s) and/ or contractor(s) and their work crews, shall have indicated an understanding of and agreement to the conditions within this Authorization, and that both DFO and MELP have the authority to inspect, and if necessary, stop any works that are not in compliance with the agreed to terms and conditions or if the agencies have fisheries related concerns.***

Conditions relating to stormwater management for development:

24. Design of the stormwater system shall be consistent with final approval of the document "Gloucester Industrial Estates Stormwater Management Plan: Final Report" by Stantec Consulting Ltd. (attached as Appendix I), currently under review. Detailed engineering design of the stormwater system must be reviewed and approved by DFO, MELP and the Township of Langley prior to site development.

25. Water treatment shall be provided for all areas not zoned or developed for industrial purposes as at May 1, 2000. Treatment will occur in first-flush treatment wetlands where feasible, while other areas will be treated by on-site oil-water separators. Envirowest Drawing No. 467-02-13 indicates treatment type for all lands within Gloucester Estates. Envirowest Drawing Nos. 467-02-14, 467-02-15, 467-02-16 and 467-02-17 provide details for first-flush treatment wetlands.

26. Stormwater from most of the Gloucester Estates development will be detained in two large detention features to be located within the golf course. Properties downstream, or outside of the catchments of these two areas must provide onsite detention that meets or surpasses the specifications outlined in the "Land Development Guidelines for the Protection of Aquatic Habitats".

27. Stormwater outfalls must be set back at least three (3) metres from the streambank and at an angle of approximately 45 degrees to the direction of stream flow. The outfall channel should be armoured with clean angular rock or other type of energy dissipater and stream bank stabilization, as approved by MELP.

Conditions relating to the Restrictive Covenant/ Leavestrip Area:

28. All leavestrip areas shown on ECL Drawing No. 467-02-12 will be protected by a restrictive covenant to be registered against the title of the property(ies) affected under Section 219 of the Land Titles Act, as per the requirements of MELP. All leavestrips are to be left in a totally undisturbed, naturally vegetated state in perpetuity. The covenant boundary must be surveyed by a registered BC Land Surveyor and a permanent fence must be constructed at the covenant boundary between development areas and the covenant areas prior to the commencement of any site development, unless otherwise agreed to by MELP.

29. After the compensatory habitat is functioning as intended, Gloucester shall not carry on any work or undertaking that will adversely disturb or impact the compensatory habitat,

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and it will take all reasonable steps to ensure that the compensatory habitat is not disturbed by others, so long as Gloucester is associated with Gloucester Industrial Estates.

30. Buildings must be set back a minimum of one and one-half (1.5) metres from the restrictive covenant boundary, except to the north of the railway tracks where buildings are to be setback a minimum of five (5.0) metres from the restrictive covenant boundary.

Conditions that relate to all mitigatory and compensatory habitats:

31. The compensatory habitats shall consist of a number of features which are listed below and numerically referenced to a plan of ultimate drainage (refer to ECL Drawing No. 467-02-12, Revision 03, attached in Appendix A). These works are also described in the Habitat Balance (Appendix B). Design drawings are referenced for each project on the ultimate drainage plan.

Rev 5

In the Northeast Quadrant of the development -

Compensatory Site A, located at or near Site 1:

- Enhancement of an existing watercourse, including partial realignment, wetland/pond creation and riparian enhancement (refer to ECL Drawing No. 467-06-01R, dated March 1999). This watercourse discharges to the existing roadside ditch at 60th Avenue, subsequently flowing in a culvert under 60th Avenue.

- Native shrubs shall include a mix of species (minimum size #2 pot) including snowberry, red elderberry, salmonberry, red-flower currant, pussy willow, red-osier dogwood and thimbleberry (no species to consist of more than 20 percent of the total). Live stakes shall be planted at a density of 5 stakes per square metre.

- Large woody debris (tree, log and rootwad) placement will be undertaken as directed by the environmental consultant. All large woody debris will be placed in such a manner so as to ensure that they are appropriately keyed into the sides of banks or are otherwise stable. Rootwads should be placed so that the gnarly portions of the root mass are below the wetted perimeter of the creek/ pond area, thus providing maximum refuge cover for juvenile salmonids. Trees and logs must have a minimum diameter of 350 mm; rootwads a minimum diameter of 2.0 metres.

- Marsh planting in the northeast quadrant of the development will be undertaken as per the specifications indicated on ECL Drawing 467-02-10A (species list). All wetland planting will meet the minimum density criteria of 4 plants per square metre. Marsh planting may be undertaken early in the spring planting season post construction, provided that appropriate sediment control measures are undertaken throughout the winter season to prevent downstream sedimentation from such areas. Marsh planting must be completed by April 30, the end of the spring planting season.

In the Southeast Quadrant of the development -

Compensatory Site B, located at or near Site 9:

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- Re-alignment of a watercourse, including development of pools (each with two rootwads) at 30 metre intervals, boulder complexing (minimum 6 boulders per 30 metre interval), and riparian enhancement (refer to ECL Drawing No. 467-02-09, Revision 00, dated April 12, 1999, and Hunter Laird Engineering Ltd. Job No. 4518, Sheets 9 of 14 and 10 of 14, both Revision A and dated July 29, 1999.

- A 1 metre wide strip on each side of the channel/pools is to be live-staked with a combination of red-osier dogwood and willow at a density of 5 stakes per square metre. Densities for trees and shrubs shall be one per five square metres and one per one square metre, respectively. Trees shall be increased in number to ten percent of total plants. Salvaged plant material may be used as an alternative to nursery stock, provided that it meets the required success rate.

- Rip rap is to be deleted from the side slopes of the pools; refer to ECL Dwg. #467-02-09.

- Boulder and boulder cluster placement will be undertaken as per the direction of the environmental consultant. Boulder complexing should be undertaken to provide fish habitat, direct flow, promote flushing, prevent infilling and to ensure bank stabilization, where necessary. Boulders must be appropriately keyed into the sides of banks and placed to ensure they are stable. Boulder diameter may be varied, depending on stream cross-section and gradient, but must average 400mm.

In the Southwest Quadrant of the development -

Compensatory Site C, located at or near Site 11:

- Pond/wetland creation north of Gloucester Way within the lands designated as future golf course (refer to ECL Drawings 467-02-10A and 467-02-10B).

- Wetland plants shall be planted at a density of four plants per square metre and trees and shrubs at densities one per five square metres and one per one square metre, respectively.

- The configuration of the constructed habitat may be revised subject to advance notification to DFO and completion of a similar or greater amount of habitat.

- Large woody debris placement should provide a minimum average of 25% cover in pools/ wetland using either gnarly rootwads and/ or whole tree sections.

Compensatory Site D, located at or near Site 17:

- Re-alignment of a watercourse south of Gloucester Way (refer to Aplin & Martin Consultants Ltd. Drawing Nos. 96025SR-1, Revision 1; 96025SR-2, Revision 2; and 96025SR-3, Revision 2). The portion adjacent to Gloucester Way is to be located within a 15-metre wide corridor; habitat details for this portion are shown in ECL Drawing No. 467-04-06, Revision 01. Habitat details for the remaining portions are shown in ECL Drawing No. 467-02-08, Revision 01. The north-south portion is to be constructed with a corridor width of 25 metres. Wherever possible, existing trees and

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shrubs are to be retained along the margins of the new watercourse. Where existing vegetation is disturbed it will be re-planted in accordance with the specifications on ECL Drawing No. 467-02-08, Rev 01, and as detailed further herein.

- Deflector logs, aeration logs and rootwads shall each be installed in the channel at 10 metre intervals. Boulder clusters, each comprised of a minimum of four boulders of a minimum diameter of 400mm, are to be installed at 5 metre intervals.

- A one metre wide strip on each side of the channel is to be live-staked with a combination of red-osier dogwood and willow at a density of 5 stakes per square metre. Densities for trees and shrubs shall be one per five square metres and one per one square metre, respectively. Salvaged plant material may be used as an alternative to nursery stock.

- View/ access points around the constructed wetland/ pond areas at the "golf course" will be constructed so that access into and around the watercourse is discouraged. If access is or becomes problematic (i.e. interferes with the success of any aspect of the constructed habitat), additional measures may be required to prevent human encroachment into such areas (i.e. low fencing).

Conditions that relate to the monitoring/ evaluation program:

32. For each component of the overall habitat compensation plan, Gloucester shall carry out a monitoring program (the "Monitoring Program") which will extend for five (5) years post-construction and will include the following:

a) if a project only involves disturbance(s) to, or removal of, riparian revegetation, a brief report describing plant survivorship and including photos is required yearly to three (3) years post-planting.

b) an assessment of the physical stability (see details of b) below) of any newly constructed works must be conducted a minimum of two (2) times during the first winter, in November/ December and February/ March. Any non-compliance issues or other problems with any aspect of the functioning of newly constructed habitat or that may have a negative impact to fisheries resources (e.g. erosion, slope failures) must be reported to both DFO and MELP within five (5) working days post-inspection and remediation measures implemented immediately, as approved by DFO and/ or MELP;

c) an annual photographic (date stamped) assessment of the compensation habitat and physical stability of the works, noting any changes in the function of the habitat for five (5) years post-construction. The assessment should also include looking for any evidence of erosion, slumping, tension cracks, movement of instream structures, bed material changes, sediment or debris accumulation and sediment transport changes. If gravels have been placed instream, an estimation of gravel depth, noting any changes, should be conducted each time the site is visited;

d) an annual assessment of the planted riparian vegetation for three (3) years post planting. Plant survival must be at least 80% for ground cover, forbs and shrubs

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and 100% for trees for the duration of the monitoring program. Should this survivorship not be achieved, additional planting is required to be undertaken immediately during the planting season of, or immediately following, the assessment;

e) measurements of water temperature, pH, dissolved oxygen, and rough estimate of water flow should be recorded each time the site is visited for monitoring;

f) for relocated and/ or constructed watercourses and ponds, fish sampling must be undertaken using baited minnow traps, or an acceptable alternative sampling method, a minimum of once annually during the time of year that will maximize potential to determine fish presence;

g) for relocated and/ or constructed watercourses and ponds, assessment of in-stream aquatic invertebrate populations must be undertaken a minimum of once annually during the 2nd (second) and 5th (fifth) years of the five (5) year monitoring program and during the time of year that will yield maximum diversity and quantity of invertebrate species (usually during the late spring/ early summer). Sampling should be conducted in riffle-type habitats at a minimum of three (3) locations (upper, middle and lower stream reach) if the stream section is 15 meters in length or longer; at a minimum of one (1) location if the stream section is less than 15 meters in length. Invertebrates collected are to be counted and identified to the to the Family level. Data from the invertebrate assessment shall be submitted in the monitor's report.

h) the Monitoring Program shall be conducted by a qualified biologist, or other professional who has experience in this area, and who is acceptable to DFO;

i) the provision to DFO of the annual results of the Monitoring Program in a written report, including an as built plan (where applicable), and any other relevant documents and photographs, by the first of December of each year of the Monitoring Program;

j) the fifth years monitoring report for any project shall provide the results of the final year's monitoring and shall summarize the findings of the five years of annual monitoring. The final report will provide a functional assessment of the performance of the compensatory habitat and will include photographs of the constructed compensatory works;

k) should any deficiencies in the compensatory habitat be identified by Gloucester, the environmental monitor, any agents or contractors working on behalf of Gloucester, DFO and/ or MELP, the parties shall notify one another in a timely manner. Any identified deficiencies with regard to the form or functioning of the compensatory habitat must be addressed in a timely manner and communicated in writing to DFO and/ or MELP, and resolved as per their direction.

l) should the clauses in 33 b) or c) be enacted, an additional annual and final monitoring report will be required in the two years following its enactment.

33. The compensatory habitat will be deemed to functioning as intended if, in the opinion of

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DFO,

- the habitat is physically stable;
- it functions as designed,
- riparian vegetation has achieved the targeted survivorship;
- that there is sufficient aquatic invertebrate production to function to provide, in the opinion of DFO, sufficient food and nutrients to downstream habitats; and,
- where fish accessible habitat has been constructed, the site functions to provide accessible habitat for salmonids.

Following the initial monitoring period, and any extensions thereof, DFO will assess the success of the compensatory habitat and determine whether of not it is functioning as intended, and choose the appropriate course of action as outlined below:

a) the compensatory habitat is functioning as intended and will be self-sustaining without further major remedial work. The Monitoring Program will be terminated; or

b) the compensatory habitat is not functioning as intended. Gloucester shall extend the Monitoring Program, including remedial work, for a minimum of an additional two years to allow more time for the habitat to become adequately established;

c) the compensatory habitat is not functioning as intended and further remedial work is not likely to rectify the situation. Gloucester shall then carry out alternative compensatory works of similar habitat value within the same watershed and requiring an additional monitoring period.

34. Gloucester shall ensure that the compensatory habitat is functioning as intended for the lifetime of Gloucester Industrial Estates. If at any time Gloucester becomes aware that the compensatory habitat is not functioning as intended Gloucester shall carry out any works which are necessary to enable the compensatory habitat to function as designed. If Gloucester transfers its interest in Gloucester Industrial Estates, and the transferee assumes the obligations of this Authorization in a form satisfactory to DFO, Gloucester shall thereafter be relieved of these obligations.

s.20(1)(b)

35. Gloucester has delivered to DFO two Letters of Credit totalling [redacted] These Letters of Credit are to be reduced in accordance with the Letter of Credit Reduction Schedule (refer to Appendix G).

36. If the conditions of this Authorization are not met, DFO may draw upon the letters of credit to ensure that the agreed upon terms and conditions of this Authorization are duly carried out.

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The holder of this authorization is hereby authorized under the authority of section 35(2) of the Fisheries Act, R.S.C., 1985, c.F.14, to carry out the work or undertaking described herein.

This authorization is valid only with respect to fish habitat and for no other purposes. It does not purport to release the applicant from any obligation to obtain permission form or to comply with the requirements of any other regulatory agencies.

Failure to comply with any condition of this authorization may result in charges under the Fisheries Act.

This authorization form should be held on site and work crews should be made familiar with the conditions attached.

Date of issuance: August 29, 2000

Approved by: for Dale Paterson

Title: Area Chief, Fraser River Division Habitat Unit
Habitat and Enhancement Branch

s.19(1)

161884 Canada Inc. (Gloucester) acknowledges that Fisheries and Oceans Canada has consulted with it regarding the terms of this Authorization, and confirms that it has reviewed and understands the terms of this Authorization, and it will comply with them.

Executed by an authorized signatory of 161884 Canada Inc. on the 24th/nd day of August, 2000 in the presence of:

[redacted]

Witness

Name (print):

Title (print):

161884 Canada Inc. (Gloucester)

[redacted]

Title (print)

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April 18, 2008

Fisheries and Oceans Canada
Habitat and Enhancement Branch
100 Annacis Parkway
Delta, B.C., V3M 6A2

Attention: Mr. Al Jonsson
Habitat Engineer

Dear Mr. Jonsson,

s.19(1)

RE: GLOUCESTER INDUSTRIAL ESTATES, LANGLEY
AUTHORIZATION No. 99-HPAC-PA2-000-000217

Please recall the Planning Review Committee (PRC) of March 11, 2008 when the issue of a time extension to the above-reference DFO Authorization was discussed. The Authorization was amended in 2004 to extend the authorization period through 2008. Gloucester has indicated that complete development of the Gloucester Industrial Estates may take another three to four years; a three year extension has been requested. It was recorded at the PRC that you would consider a further extension on the basis of details regarding works that were yet to be completed.

All compensatory habitat described in the Authorization agreement has been constructed. However, not all of the authorized works (harmful alterations) have occurred. These "incomplete" aspects of the Authorization are summarized below (site numbers correspond with Envirowest Drawing No. 467-02-11, Rev. 03, copy attached).

Site 3 - elimination of a minor ravine, elimination of a portion of a wetland, and elimination of riparian vegetation (associated with a setback relaxation) adjacent to a wetland; and

Site 19 – elimination of a pond and watercourse.

Site 3 is located in the extreme northeast quadrant of the development (at the municipal boundary, south of 60th Avenue and north of the railway tracks). Impacts are associated with widening of 60th Avenue, installation of a watermain and access road through a high point of a wetland (on a historic logging road), and straightening/averaging of the wetland's setback boundary.

Site 19 is located immediately west of the existing Gloucester site office. An historic creek channel (that has been isolated since the late 1970s when a new channel was created east of 272nd Street) is to be infilled.

ECL ENVIROWEST CONSULTANTS LIMITED
Suite 130 - 3700 North Fraser Way
Burnaby, B.C. V5J 5J4
voice: 604-451-0505
facsimile: 604-451-0557
www.ecl-envirowest.bc.ca

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With respect to timing, lands near Site 3 will likely be among the last to develop (perhaps in 2011). Lands at Site 19 are expected to be developed in the next two years.

The Gloucester Industrial Estates include approximately 90 acres that are designated in the current Official Community Plan (OCP) as golf course. Gloucester has applied to revise the OCP to remove the golf course designation. Two potential development scenarios exist in this regard.

If golf course development is required and is pursued, habitat requirements will have been partially achieved through development of wetted habitat in conjunction with the "interim" detention facility on the east side of 272nd Street, south of 56th Avenue. Designation of protected habitat area, as generally depicted in the Envirowest Drawing No. 467-02-12 Rev. 05, copy attached) will fulfill the commitment associated with the golf course.

If the OCP is amended such that golf course development is not required, there would be a requirement to provide additional stormwater detention (due to the conversion of approximately 45 acres of land to industrial designation). Should this occur, the additional detention would be developed contiguous with (or near) the "interim" detention facility, and incorporate wetted habitat features and designation of protected habitat area as generally depicted in the Envirowest Drawing No. 467-02-12 Rev. 05. The remaining 45 acres of the golf course lands would be turned over to the Township for conservation/parkland.

Gloucester will advise you of the outcome of their application to amend the OCP with respect to the golf course. In either case, DFO will be involved with respect to delineation of the habitat boundary and authorization of works affecting fish habitat.

Please call me should you have any questions.

Yours truly,
ECL ENVIROWEST CONSULTANTS LIMITED

[redacted]

[redacted]

s.19(1) attach.

cc: [redacted] Gloucester
Teresa Hanson, Township of Langley

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envirowest
ENVIRONMENTAL CONSULTANTS

ECL ENVIROWEST CONSULTANTS LIMITED
Suite 200 — 900 Helmcken Boulevard, New Westminster, B.C. Canada V3L 3B8
phone: (604) 521-3337 fax: (604) 521-3338

EXISTING DRAINAGE
GLOUCESTER INDUSTRIAL ESTATES
Langley, B.C.

DATE: May 2000 DRAWING NO.: 467-02-11 Rev 03

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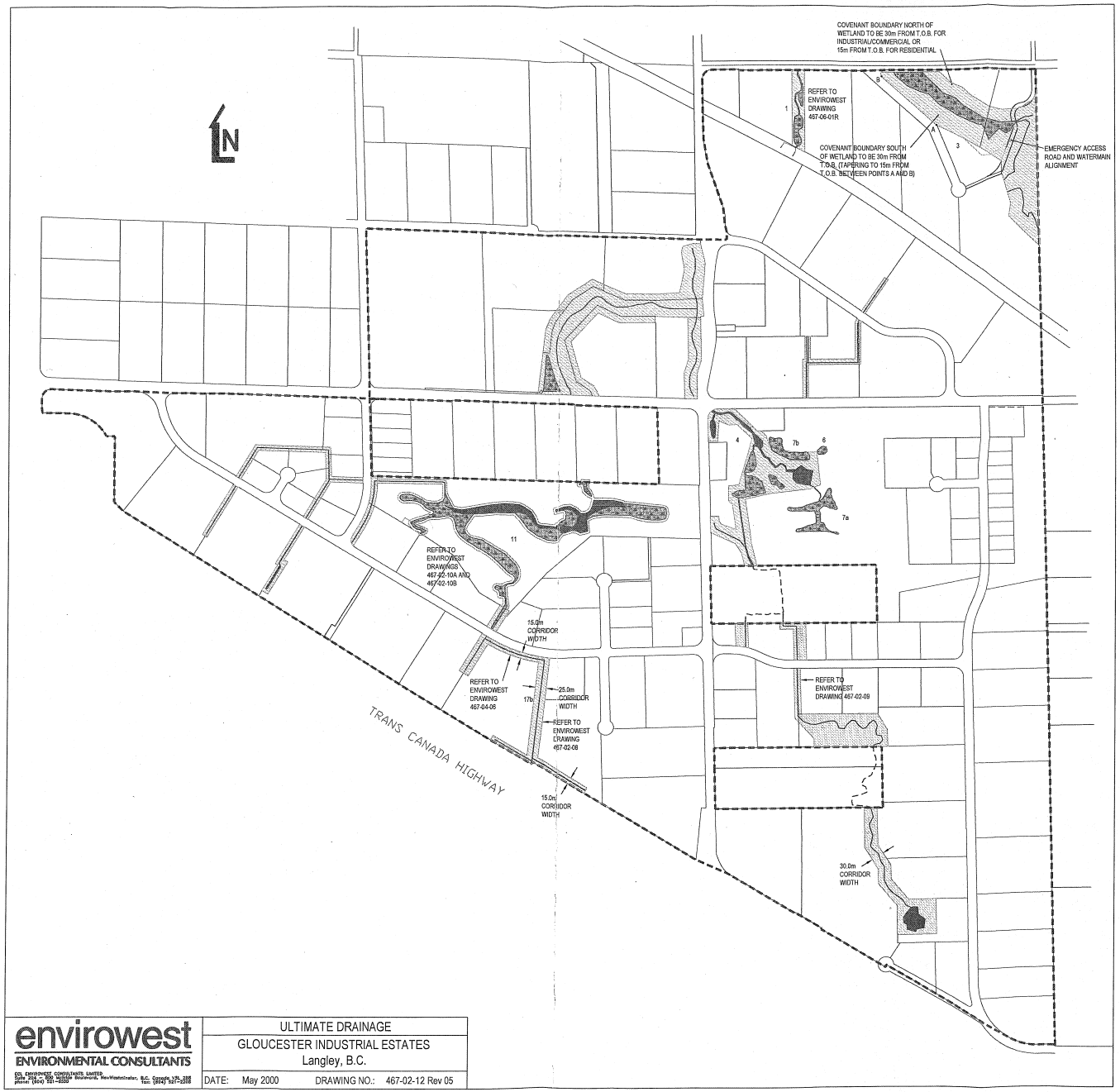

envirowest
ENVIRONMENTAL CONSULTANTS

ECL ENVIROWEST CONSULTANTS LIMITED
Suite 1790 - 200 Burrard Street, Vancouver, B.C. Canada V6C 3L6
phone: (604) 687-2220 fax: (604) 687-2288

ULTIMATE DRAINAGE
GLOUCESTER INDUSTRIAL ESTATES
Langley, B.C.

DATE: May 2000 DRAWING NO.: 467-02-12 Rev 05

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envirowest
environmental resource professionals

OCEANS, HABITAT & ENHANCEMENT BRANCH

December 15, 2008

DEC 17 2008

LOWER FRASER AREA

Mr. Alan Jonsson
Fisheries and Oceans Canada
Habitat and Enhancement Branch
Unit 3 - 100 Annacis Parkway
Delta, BC V3M 6A2

DFO File No. 99-HPAC-PA2-000-000217

Dear Mr. Jonsson,

Re: GLOUCESTER INDUSTRIAL ESTATES, LANGLEY, BC
275 Street Bio-filtration Pond/Wetland Compensation Habitat
Post-Construction Habitat Monitoring Report (2008)

The following post-construction monitoring report has been prepared in accordance with Condition No. 32 (a) through (d) and 32 (h) through (l) of the Subsection 35(2) federal Fisheries Act Authorization for instream works and post construction monitoring. The report represents the first year of post construction monitoring for the above referenced project constructed 2007.

Introduction

The report represents the first year of post construction monitoring for compensation habitats constructed in 2007 in association with the development of Gloucester Industrial Estates. Gloucester Industrial Estates is located in Langley, generally encompassing lands north of the Trans-Canada Highway, west of the Langley-Abbotsford boundary, east of 264 Street and south of 60 Avenue. The habitat construction was undertaken in conjunction with a plan of subdivision of Lot 6, Plan BCP 16511,and portions of Lot 6, Plan BCP 1615, and Lot 3, Plan 8152, Section 5, Township 14, New Westminster District. Impacts associated with the development expansion works were mitigated by constructing fish habitat (Project) within the Restrictive Covenant Setback/Leavestrip Area. The habitat was constructed as per Drawing No. 467-16-01 "Planting Plan" (September 11, 2006) ECL Envirowest Consultants Limited. Minor modifications to the design were incorporated during construction to accommodate site conditions.

The construction of fish habitat included the creation of two riparian/wetland areas (e.g. Plans A and B) and the installation of native riparian and aquatic plant species. The construction and planting works were completed in spring and fall 2007, respectfully. The monitoring program includes a photographic and stability assessment of the compensation/mitigation habitat and an assessment of riparian plantings.

Envirowest visited the Project on May 1, 2008 and June 26, 2008 to assess the physical stability and survivorship of riparian and wetland vegetation within the habitat areas.

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Site photographs are included in Attachment A, the Fisheries Authorization is included in Attachment B and Planting Plan is included in Attachment C.

Results

The following summaries present results of the data collected during the 2008 monitoring period.

Physical Stability Assessment

A qualitative visual assessment of the constructed wetland and riparian fish habitats (i.e. Plans A & B) noted evidence of minor tension cracks on the banks adjacent to the Plan B wetland. Stability issues within the Plan B habitat are minor and do not appear problematic at this time. Stability issues within the boundary of the Plan A habitat were not evident. Some beaver activity (i.e. vegetation removal) was noted within the northwest corner of the Plan B wetland habitat.

Wetland and Riparian Planting Assessment

A qualitative assessment of the wetland plantings was undertaken to ascertain survivorship and vigour of the planted materials. The wetland component of the fish habitat was originally predominated by reed canary grass (*Phalaris arundinacea*). The uppermost portion of the wetland was re-graded and the majority of the reed canary grass was removed. The wetland area was planted with specified and some substituted wetland plant species; soft-stem bulrush (*Scirpus validus*) and cattail (*Typha latifolia*) were the prevalent dominant species. Although the reed canary grass is still present within the new wetland area the installed plant material is displaying vigorous growth. The plants have established well and the stem density of the installed wetland plant material is estimated to exceed the 80 percent survivorship required by the design specifications.

During the original installation of riparian plant material, substitution of plant species was approved by Envirowest to better accommodate the constructed site conditions. The riparian plant material is vigorous and is displaying strong shoot development for the majority of installed plants. A number of the installed trees were not staked properly and have fallen over and/or have strong leans. During plant installation a number of the plants were installed in locations not conducive to there survival (i.e. standing water). The landscape contractor was advised and has undertaken changes to the planting area. The plant assemblages (riparian and wetland) will be observed for a complete growing season (i.e. plant installation fall 2007, assess spring 2009) prior to recommending remedial works. Observing the habitat during a complete growing season will assist in determining necessary remedial work. Deficiencies noted within the habitat areas shall be addressed following the spring 2009 assessment.

Maintenance (i.e. watering during periods of no precipitation) of the installed plants was undertaken following the initial installation of the plant material. A summary of the quantitative plant assessment is provided in Table 1. The survivorship criteria prescribed within the referenced Authorization is 100 percent for trees and 80 percent for all other plant material.

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Table 1. Riparian and Wetland Plant Assessment at 275 Street Habitats - April 2008			
Common Name	**Latin Name**	**# Specified**	**# Observed**
Trees			
red alder	*Alnus rubra*	404	292
western redcedar	*Thuja plicata*	51	45
Total trees		**455**	**337**
Shrubs and ferns			
beaked hazelnut	*Corylus cornuta*	93	82
black twinberry	*Lonicera involucrata*	299	275
Pacific ninebark	*Physocarpus capitatus*	258	243
salmonberry	*Rubus spectabilis*	250	173
thimbleberry	*Rubus parviflorus*	266	278
Sitka willow	*Salix sitchensis*	330	206
hardhack	*Spiraea douglasii*	46	77
lady fern	*Athyrium filix-femina*	614	492
Total shrubs and ferns		**2156**	**1990**

Tree survivorship = 74 percent Shrub, fern and wetland survivorship = 93 percent

General Observation

During a general walk about within the Gloucester Industrial Estates habitat areas, beaver activity was noted and brought to the attention of Fisheries and Oceans Canada (DFO). It was recommended the beaver dams be removed from the watercourse to ensure the storm water system functions as intended and flooding is avoided. The beaver activity was observed within the large pond habitat located immediately north of Gloucester Way and west of 272 Street. DFO approved the removal of the beaver dams, providing the resident beaver situation was also addressed. Trapping and dam removal was undertaken between the August 1, 2008 and September 15, 2008 "Fisheries Window". Also, off-road vehicle trails in and about the large pond were de-commissioned (i.e. by grading and blocking vehicle access) and seeded during the same time period.

Summary and Recommendations

Results obtained during the first year monitoring period suggest that the constructed fish habitats are stable and functioning as intended. The survivorship percent of trees (i.e. 74 percent) has not achieved the minimum required survivorship criteria (i.e. 100 percent). The survivorship percent of shrubs and ferns (i.e. 93 percent) has achieved the minimum required survivorship (i.e. 80 percent). Required re-placement planting will be undertaken following the spring 2009 site assessment, likely in the fall 2009.

Deciduous trees are well established on the perimeter of the Plan B habitat, while red alder are naturalizing on the banks of the wetland. Planting of additional conifers within the habitat is recommended.

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Plant maintenance (e.g. fertilizing, watering, invasive species removal) is to be continued over the duration of the monitoring program. The habitat is establishing well and the growth of plant material is satisfactory at this time.

s.19(1)

Please contact me at 604-451-0505 or [redacted] should you have any questions or comments regarding this report.

[redacted]**NTS LIMITED**

Copy: [redacted] Gloucester Industrial Estates
Gloucester Industrial Estates
ECL Envirowest Consultants Limited

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ATTACHMENT A
Site Photographs

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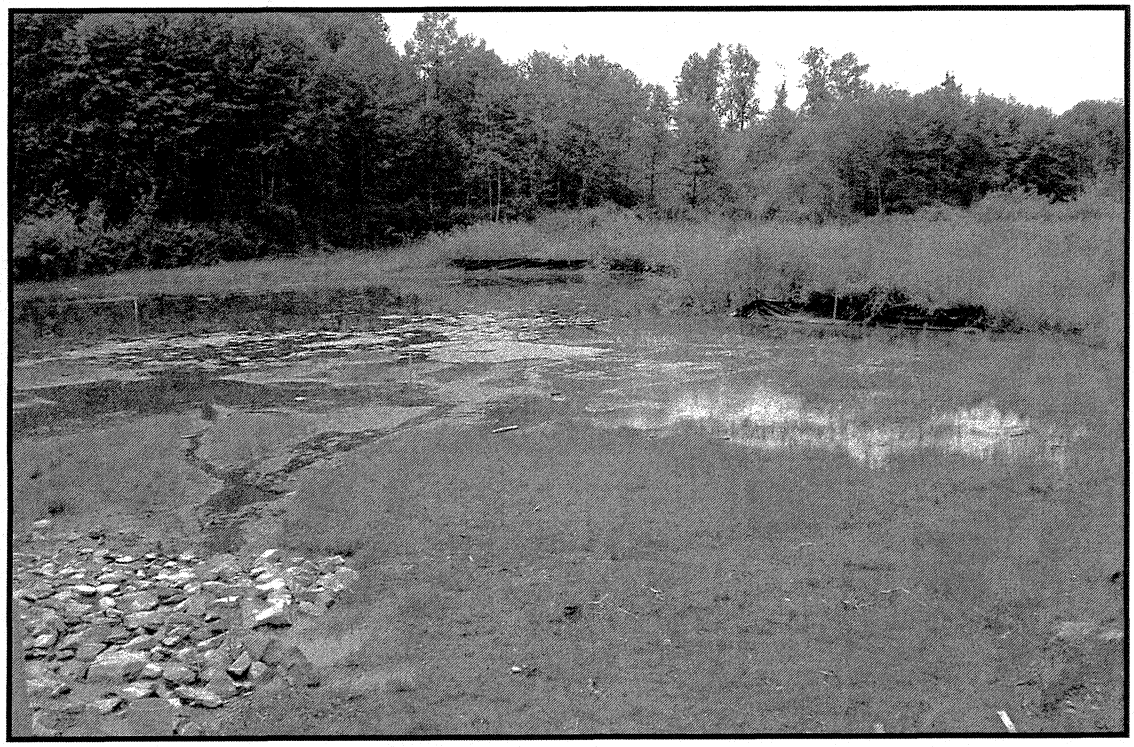

Photograph 1. Looking north at graded wetland, pre-planting (June 12, 2007).

Photograph 2. Looking north at bio-filtration channel, pre-planting (June 12, 2007).

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Photograph 3. Looking north at bio-filtration channel; during planting (July 23, 2007).

Photograph 4. Looking north at wetland, during planting (July 26, 2007).

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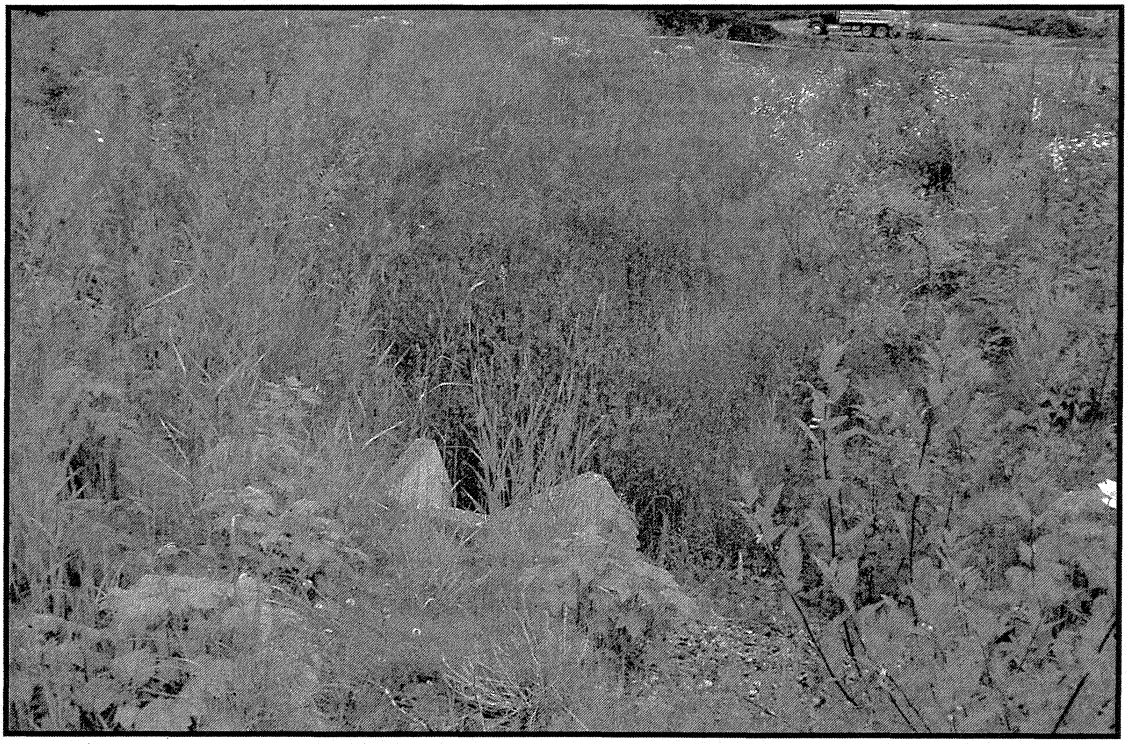
Photograph 5. Looking northwest at riparian/wetland after one growing season (June 26, 2008).



Photograph 6. Looking north at bio-filtration channel after one growing season (June 26, 2008).

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ATTACHMENT B
Authorization

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Pages 259 to / à 271

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pages 229 to / à 241

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ATTACHMENT C
Planting Plan

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LOCATION

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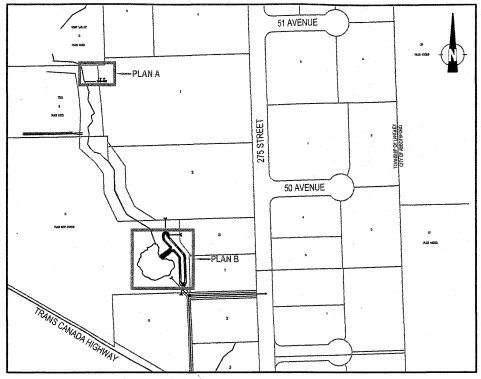

PLAN A

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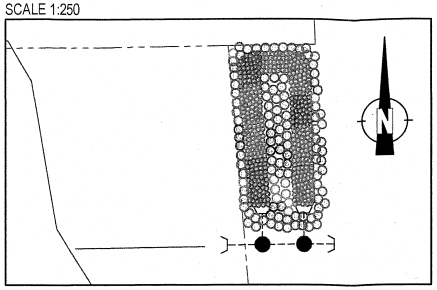
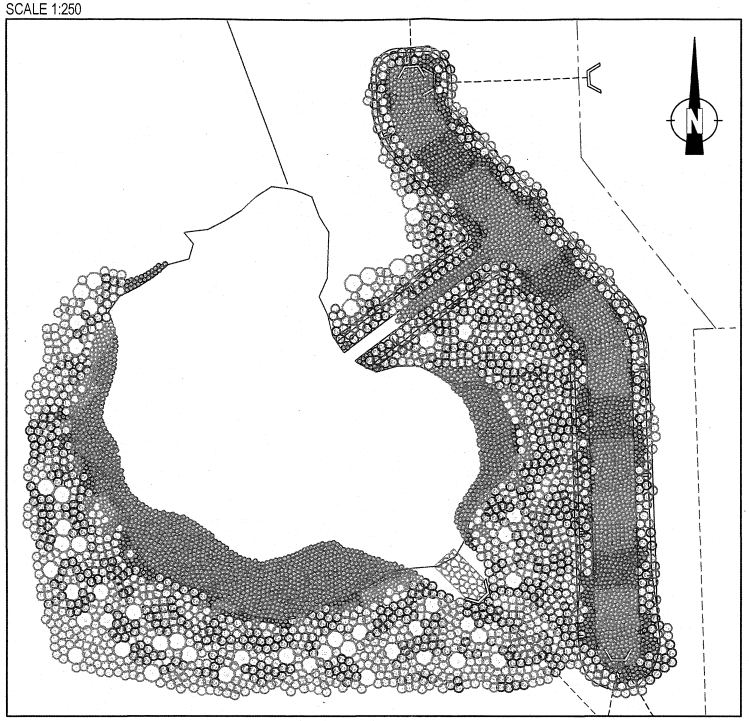


PLAN B

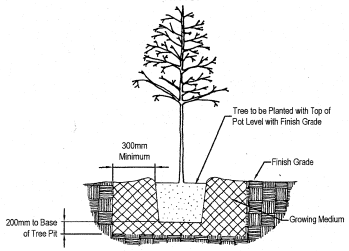
SCALE 1:250



PRIOR TO COMMENCEMENT OF LANDSCAPING SITE CONDITIONS ARE TO BE ASSESSED BY ENVIROWEST. MODIFICATIONS TO PLANT SPECIES, SIZES AND SPECIFICATIONS MAY RESULT.

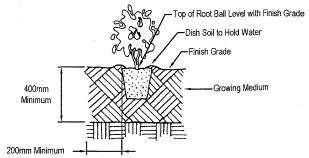
TYPICAL CONTAINER (No. 5 POT) TREE PLANTING DETAIL

N.T.S.



TYPICAL CONTAINER SHRUB AND No. 2 POT TREE PLANTING DETAIL

N.T.S.



PLANT SPECIES LIST AND SPECIFICATIONS

SYMBOL	COMMON NAME	LATIN NAME	NUMBER	COMMENTS
Tp	western redcedar	*Thuja plicata*	51	no. 5 pot; 1.2m min.; densely branched; well established
Ch	beaked hazelnut	*Corylus cornuta*	93	no. 2 pot; densely branched; well established
Ar	red alder	*Alnus rubra*	404	no. 2 pot; densely branched; well established
Ss	Sitka willow	*Salix sitchensis*	330	no. 2 pot; densely branched; well established
Rs	salmonberry	*Rubus spectabilis*	774	no. 2 pot; multi-stemmed; densely branched; well established
Li	black twinberry	*Lonicera involucrata*	299	no. 2 pot; densely branched; well established
Sd	hardhack	*Spiraea douglasii*	46	no. 2 pot; densely branched; well established
Sm	small-fruited bulrush	*Scirpus microcarpus*	788	no. 1 pot; well established
Jf	common rush	*Juncus effusus*	896	no. 1 pot; well established
At	lady fern	*Athyrium filix-femina*	614	no. 1 pot; well established
Ca	water sedge	*Carex aquatilis*	142	no. 1 pot; well established
Sc	woolly bulrush	*Scirpus cyperinus*	565	no. 1 pot; well established
Sv	soft-stemmed bulrush	*Scirpus validus*	1406	no. 1 pot; well established
Cs	slough sedge	*Carex obnupta*	132	no. 1 pot; well established

GENERAL LANDSCAPE SPECIFICATIONS

1. All works are to be conducted in accordance with the sediment control provisions of the "Land Development Guidelines for the Protection of Aquatic Habitat" jointly published by the provincial Ministry of Water, Land and Air Protection and the federal Department of Fisheries and Oceans.
2. All plant material is to be inspected and approved by Envirowest prior to installation.
3. Growing medium is to be free of any subsoils, roots, noxious grass, weeds, toxic materials, stone over 30 mm diameter, foreign objects, and possess an acidity range (pH) of 5.5 to 7.5. Growing medium to be inspected by Envirowest prior to placement.
4. All blackberry (*Rubus discolor* and *R. laciniatus*) to be cleared and grubbed from project site.
5. All debris and/or excess material from landscape operations are to be collected and disposed offsite in accordance with all regulatory requirements.
6. Disturbed areas to be seeded with red fescue (*Festuca rubra*) augmented with fireweed (*Epilobium angustifolium*) and goldenrod (*Solidago canadensis*) seed; percentage composition and application rate of final seed mix to be determined by Envirowest.
7. All western redcedar (*Thuja plicata*) must be of native stock; any cultivars, such as *T. plicata* var. *excelsa*, are not to be planted.
8. The contractor is to provide one (1) year of plant maintenance. Plant maintenance is to include watering, selective pruning and clearing of blackberry. Species survivorship is to equal one-hundred (100) percent one (1) year from planting. Replacement of dead stock may be required to fulfill this specification.

REFERENCE DRAWINGS

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2. Plan No. 26057-02. Sheet No. 02 of 06. "Key Plan North Half". April 2006. Aplin & Martin Consultants Ltd.
3. Plan No. 26045-11. Sheet No. 11 of 15. Rev. 2. "Pond And Pond Details". August 22, 2006. Aplin & Martin Consultants Ltd.

GLOUCESTER INDUSTRIAL ESTATES
Langley, BC

BIOPOND

envirowest
ENVIRONMENTAL CONSULTANTS
ECL ENVIROWEST CONSULTANTS LIMITED
Suite 130 - 3700 North Fraser Way
Burnaby, B.C. V5J 5J4
www.ecl-envirowest.bc.ca
voice: 604-451-0505
facsimile: 604-451-0557

PLANTING PLAN

DESIGN: TP/PJW	DRAWN: ZSR/SDJ	CHECKED:	REVISION: 00 REVISION DATE:
SCALE: As Shown			DRAWING NUMBER: 467-16-01
DATE: September 11, 2006			

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December 15, 2009

Mr. Alan Jonsson
Fisheries and Oceans Canada
Habitat and Enhancement Branch
Unit 3 - 100 Annacis Parkway
Delta, BC V3M 6A2

DFO File No. 99-HPAC-PA2-000-000217

Dear Sir,

Re: GLOUCESTER INDUSTRIAL ESTATES, LANGLEY, BC
275 Street Bio-filtration Pond/Wetland Compensation Habitat
Post-Construction Habitat Monitoring Report - Year 2 of 3

The following post-construction monitoring report has been prepared in accordance with Condition Nos. 32 (a) through (d) and 32 (h) through (l) of the Subsection 35(2) of the Fisheries Act Authorization issued by Fisheries and Oceans Canada (DFO). The report summarizes the performance, survivorship, and effectiveness of the compensation habitat.

Introduction

The report represents the second year of a three year post construction monitoring program for compensation habitats constructed in 2007 in association with the development of Gloucester Industrial Estates.

Gloucester Industrial Estates is located in Langley, generally encompassing lands north of the Trans-Canada Highway, west of the Langley-Abbotsford boundary, east of 264 Street and south of 60 Avenue in the subdivided lands legally described as Lot 6, Plan BCP 16511, and portions of Lot 6, Plan BCP 1615, and Lot 3, Plan 8152, Section 5, Township 14, New Westminster District. Impacts associated with the development expansion works were mitigated by constructing fish habitat (Project) within the Restrictive Covenant Setback/Leavestrip Area. The habitat was constructed as per Drawing No. 467-16-01 "Planting Plan" (September 11, 2006) ECL Envirowest Consultants Limited. Minor modifications to the design were incorporated during construction to accommodate site conditions.

The construction of fish habitat included the creation of two riparian/wetland areas (refer to Plans A and B) and the installation of native riparian and aquatic plant species. The construction and planting works were completed in spring and fall 2007, respectfully. The monitoring program includes a photographic and stability assessment of the compensation/mitigation habitat and an assessment of riparian plantings.

Envirowest visited the Project on April 7 and July 13, 2009 to assess the physical stability and

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survivorship of riparian and wetland vegetation within the habitat areas. Site photographs are included in Attachment A, the Fisheries Authorization is included in Attachment B, and the Location Drawing is included in Attachment C.

Results

The following summaries represent results of the data collected during the 2009 monitoring period.

Physical Stability Assessment

A qualitative assessment of both habitats depicted by Plans A and B determined there were no stability issues. Banks, slopes, and wetland areas are stable and well vegetated, reducing the potential for erosion. Beaver activity (e.g. foraging) was noted within the headwater wetland area, although damage did not appear recent.

Wetland and Riparian Planting Assessment

A quantitative assessment of the planting areas was undertaken to evaluate the percent survivorship of installed plantings. A survivorship of 100 percent is required for trees and survivorship of 80 percent is required for shrubs and forbs.

Riparian plant assessment results are provided in Table 1.

Table 1. Riparian Plant Assessment at 275 Street Habitats - April 2009

Common Name	Latin Name	No. Specified	No. Observed
Trees			
red alder	*Alnus rubra*	404	331
western redcedar	*Thuja plicata*	51	43
Total trees		**455**	**374**
Shrubs and ferns			
beaked hazelnut	*Corylus cornuta*	93	78
black twinberry	*Lonicera involucrata*	299	272
Pacific ninebark	*Physocarpus capitatus*	258	232
salmonberry	*Rubus spectabilis*	250	170
thimbleberry	*Rubus parviflorus*	266	261
Sitka willow	*Salix sitchensis*	330	182
hardhack	*Spiraea douglasii*	46	77
lady fern	*Athyrium filix-femina*	614	478
Total shrubs and ferns		**2156**	**1750**

Tree survivorship = 83 percent

Shrub survivorship = 82 percent

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Plant material located within Plan B was generally vigorous, while the plant material located within Plan A displayed less vigour. Planted shrubs, but not trees achieved survivorship criteria.

Since the initial planting of the wetland areas, aquatic plant material has displayed vigorous growth and high stem density. The original wetland area was predominated by reed canary grass (*Phalaris arundinacea*), although cattail (*Typha latifolia*) and to a lesser degree, soft-stem bulrush (*Scirpus validus*) have now become well established. The bio-filtration channels within both Plan A and B are densely vegetated with aquatic plants. Reed canary grass is still present within portions of the Plan B wetland, primarily downstream of the constructed wetland. Currently, wetland plant material is estimated to exceed the 80 percent survivorship criteria.

Maintenance of the habitat has been undertaken over the duration of the monitoring program. Issues such as invasive species removal, and watering were addressed during the initial growing season. A number of trees, which were noted to be leaning during the 2008 monitoring period, had been staked.

Summary and Recommendations

While the aquatic plant material within the wetland has become dense and the riparian plants are developing into a healthy assemblage, tree survivorship is below design criteria. The minimum required survivorship criteria for trees is 100 percent. As such, the remedial planting of a minimum of 81 trees is recommended. Trees should be installed in spring 2010.

Tree species recommended for remedial planting are listed in Table 2

Table 2. Plants Specified for Remedial Planting

Common Name	Latin Name	Pot Size	# Specified
bigleaf maple	*Acer macrophyllum*	No. 5 pot	5
Sitka spruce	*Picea sitchensis*	No. 5pot	20
Sitka spruce	*Picea sitchensis*	No. 2 pot	20
western redcedar	*Thuja plicata*	No. 5 pot	15
western redcedar	*Thuja plicata*	No. 2 pot	15
red alder	*Alnus rubra*	No. 5 pot	25
Total plants			**100**

The preferred landscape contractor shall consult with Envirowest prior to plant installation to ensure trees are located and installed to design specifications. Continued maintenance of the habitat, such as watering is recommended to ensure plant survivorship criteria is achieved. Invasive plant species removal shall be undertaken during the remedial planting process.

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[redacted] should you have any
eport.

TS LIMITED

[redacted]

Copy: [redacted]

Gloucester Industrial Estates
Gloucester Industrial Estates
ECL Envirowest Consultants Limited

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ATTACHMENT A
Site Photographs

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Photograph 1. Looking south at bio-filtration wetland (June 28, 2008).

Photograph 2. Looking west at south bank of wetland (April 7, 2009).

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Photograph 3. Looking east at wetland (May 1, 2008).

Photograph 4. Looking east at wetland (April 7, 2009).

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ATTACHMENT B
DFO Fisheries Authorization

Pages 282 to / à 284
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pages 174 to / à 176

Pages 285 to / à 297

are duplicates of

sont des duplicatas des

pages 229 to / à 241

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ATTACHMENT C
Location Drawing

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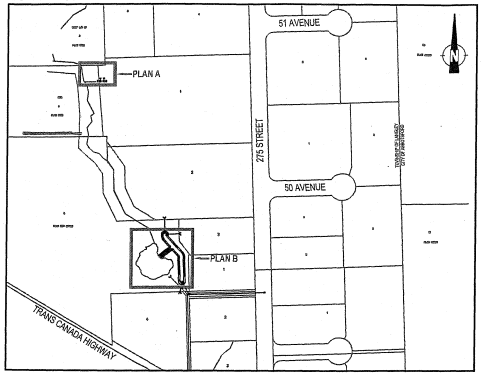
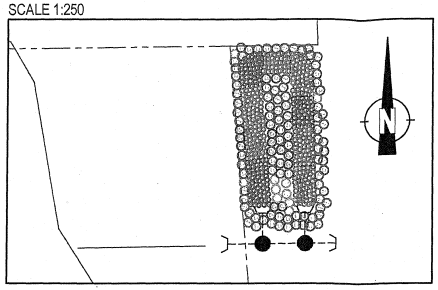
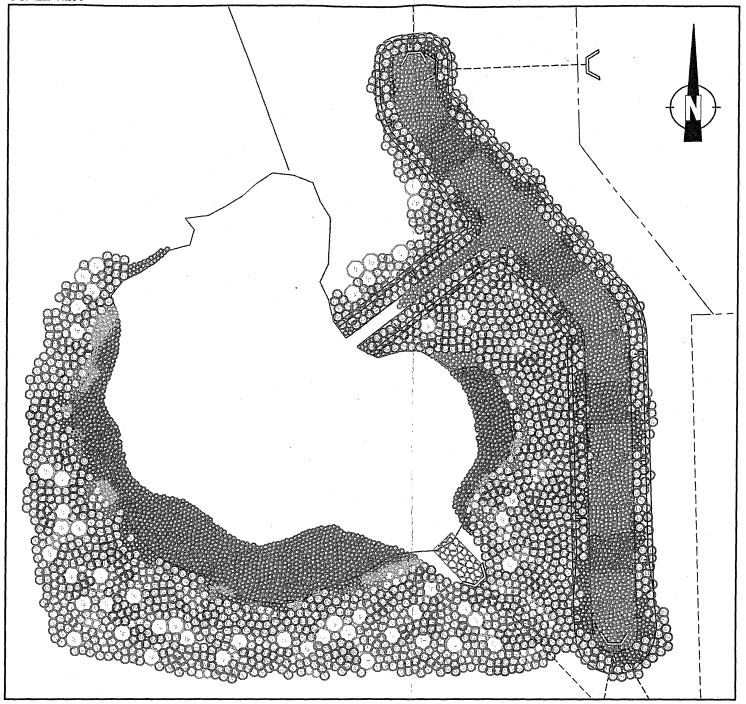
LOCATION
SCALE 1:3000



PLAN A
SCALE 1:250



PLAN B
SCALE 1:250



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TYPICAL CONTAINER (No. 5 POT) TREE PLANTING DETAIL
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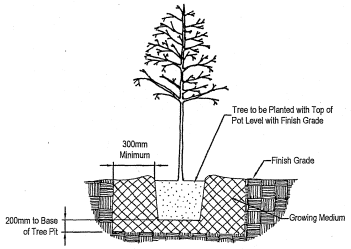

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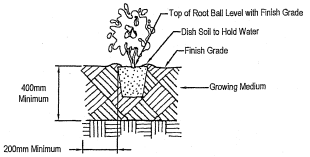

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LI	black twinberry	*Lonicera involucrata*	299	no. 2 pot; densely branched; well established
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	small-fruited bulrush	*Scirpus microcarpus*	788	no. 1 pot; well established
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	lady fern	*Athyrium filix-femina*	614	no. 1 pot; well established
	water sedge	*Carex aquatilis*	142	no. 1 pot; well established
	woolly bulrush	*Scirpus cyperinus*	565	no. 1 pot; well established
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GLOUCESTER INDUSTRIAL ESTATES
Langley, BC

BIOPOND

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www.ecl-envirowest.bc.ca
voice: 604-451-0505
facsimile: 604-451-0557

PLANTING PLAN

DESIGN:	DRAWN:	CHECKED:	REVISION:	REVISION DATE:
TP/PJW	ZSR/SDJ		00	
SCALE: As Shown			DRAWING NUMBER: 467-16-01	
DATE: September 11, 2006				

Pages 300 to / à 304

are withheld pursuant to section

sont retenues en vertu de l'article

20(1)(b)

of the Access to Information Act

de la Loi sur l'accès à l'information

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From: XPAC Referrals Pacific
Sent: Tuesday, August 27, 2013 10:36 AM
To: Bergsma, Ian
Subject: 2013-08-26 PRAF Gloucester Detention Pond
Attachments: DFO form.pdf; Figure 1A and 1B.pdf; aerial - detention pond.pdf; detention pond design.pdf

From: [redacted]
Sent: August-26-13 10:48 AM
To: XPAC Referrals Pacific
Subject: Gloucester Detention Pond

s.19(1)

Please find attached the following:

1. Project Review application form;
2. Figure showing previously approved (99-HPAC-PA2-000-000217) concept plan with total habitat areas, and figure showing currently proposed total habitat areas;
3. Aerial photograph of interim detention pond approved by DFO;
4. Plan of habitat features to be included in proposed pond.

Please contact me if you have any questions.

[redacted]
office: 604-944-0502 ext. [redacted]
cellular: [redacted]
facsimile: 604-944-0507
Suite 101 - 1515 Broadway Street
Port Coquitlam, British Columbia
Canada V3C 6M2
envirowest consultants inc.
www.envirowest.ca

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PROJECT NOTIFICATION AND REVIEW APPLICATION FORM

FOR DFO OFFICE USE ONLY
DFO Receive Date:
DFO Sub-Area Office:
Path #:
ADM:

To determine whether you should complete this form, follow the steps on DFO's Working Near Water website (www.pac.dfo-mpo.gc.ca/habitat/know-savoir-eng.htm). For instructions on how to complete and submit this form, refer to the Directions (www.pac.dfo-mpo.gc.ca/habitat/steps/praf/guide-eng.htm) or click on the number links on the left. Forms will not be processed unless all fields are properly completed as described in the directions. Where additional information is provided in attached documents, you must include an appropriate summary in the space provided on the form. Please note that it is your responsibility to understand and comply with other jurisdictions and regulations applicable to your project.

Application Form Type (select only one type):

1 ○ **Notification to DFO.** *Please notify DFO 10 business days before starting your work. DFO does not typically respond to Notifications.*

or ◉ **Request for Project Review**

Have you attached "Additional Information to Support a Project Review"? ◉ Yes ○ No

or ○ **Request for a *Fisheries Act* Authorization?**

Have you attached "Additional Information for a Fisheries Act Authorization"? ○ Yes ○ No

Submission of this form serves as a Subsection 58(1) Schedule VI Fishery (General) Regulations application.

2 **Project Title:** Gloucester Industrial Estates - modification of authorized works

Project Summary

3 Is this a "Building Canada" federally funded infrastructure project? ○ Yes ◉ No

Is the work or undertaking proposed in response to an emergency as defined by DFO? ○ Yes ◉ No

Does the project:

- *Have any components within 30 m of the high water mark of a watercourse or water body?* ◉ Yes ○ No
- *Require removal of vegetation within 30 m of the high water mark of a watercourse or water body?* ◉ Yes ○ No
- *Have downstream impacts on water quality or water quantity?* ○ Yes ◉ No

Does the project involve in-water works (below the high water mark)? ◉ Yes ○ No

Contact Information for Proponent, Contractor and Consultant

4 Name of proponent: Beedie Development Group

Province/Territory: BC

Contact name: [redacted]

Postal code: V5G 3B4

s.19(1)

Mailing address: 3030 Gilmore Diversion

Tel no.: [redacted] Ext.

Fax no.: (604) 432-7349

City/Town: Burnaby

Email: [redacted]

Is the Proponent the primary contact for this project? ○ Yes ◉ No

If no, please enter information for the primary contact in the space below:

Select type of additional contact: ○ Contractor ◉ Consultant

Name of contractor/consultant: Envirowest Consultants Inc.

Province/Territory: BC

Postal code: V3C 6M2

Contact name: [redacted]

Tel no.: (604) 944-0502 Ext.

Mailing address: Suite 101 - 1515 Broadway Street

Fax no.: (604) 944-0507

Email: [redacted]

City/Town: Port Coquitlam

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Location of Proposed Development

5 DFO sub-area: Lower Fraser Valley

Name of nearest community: Aldergrove

Municipality or District: Langley Province/Territory: BC

Address or legal description:
Lot 1, Twp 14, NWD, PL LMP44280

Name of watershed: West Creek

Name of watercourse(s) or water body(ies) likely to be affected: West Creek and tributaries south of 56 Avenue

Map coordinates of the proposed development:

Latitude 49 06 *N* **or** *UTM zone* ____ ; _____ *Easting* _____ *Northing*
Longitude 122 28 *W*

6 Brief directions to access the proposed project site: *(limit of 240 characters)*
90 acre property located at the southeast corner of 56 Avenue at 272 Street

Other Permitting Processes

7 **For projects proposed in British Columbia:**

Have you made a submission under BC Water Act? ◉ Yes ○ No

If yes, please indicate the type and provide the file number:

- ○ Section 9 Notification - Tracking #:
- ◉ Section 9 Approval - Water File #: A2004880
- ○ Water License - Water File #:

Does the British Columbia Riparian Areas Regulation apply to this project? ○ Yes ◉ No

If yes, are you requesting a variance? File #: ○ Yes ○ No

For projects proposed in Yukon:

Have you submitted a project application to Yukon Environmental and Socio-Economic Assessment Board? ○ Yes ○ No

If yes, please provide the YESAB project number:

Description of the Aquatic Environment

8 **What is the type of watercourse or water body that you plan to work in or near?**

Freshwater:	☑ Stream	☐ Lake	☐ Wetland
	☐ River mainstem	☐ Pond	
	☐ Active floodplain	☐ Reservoir	
Coastal and Marine:	☐ Exposed coastline	☐ Cove	☐ Mud flat
	☐ Salt marsh	☐ Bay	☐ Beach
Other:	☐ Estuary		

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Description of the Aquatic Environment *(continued)*

9 **Briefly describe the biological and physical characteristics of the proposed project site.** *(limit of 800 characters)*
(Channel width, type and flow, tides, water depth, substrate type and density, aquatic and riparian vegetation type and density)

The project area includes a historically straightened section of West Creek, the first phase of a detention pond, a constructed tributary channel, and several natural ponds/wetlands.

Coho salmon and cutthroat trout inhabitat some of the wetted habitats in this area.

10 **Include representative photos of affected area and clearly mark the location of proposed activities.**

Have you attached photos? ◉ Yes ○ No

11 **For freshwater, what fish species are known to be present at or near your project?**

☑ Salmon (anadromous only) ☑ Other

12 **Are any aquatic species likely present at the project site that are:**

Listed under the federal Species at Risk Act?	○ Yes	◉ No	○ Uncertain
Designated under the British Columbia Wildlife Act?	○ Yes	◉ No	○ Uncertain
Listed under the Yukon Wildlife Act?	○ Yes	○ No	○ Uncertain

If yes, list the species:

Description of the Proposed Development

13 **With which industry is your project associated?**

☐ Agriculture	☑ Industrial/commercial	☐ Power generation
☐ Aquaculture	☐ Military/security	☐ Private residential
☐ Commercial fishing	☐ Mining	☐ Transportation
☐ Conservation/restoration	☐ Oil and gas	☐ Urban and rural development
☐ Forestry		
☐ Other:		

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Description of the Proposed Development *(continued)*

14 What are you planning to do? Briefly describe all the project components you are proposing in or near water.
(limit of 400 characters)

Have you considered and incorporated all options for redesigning and relocating your project to avoid negative impacts to fish and fish habitat? ◉ Yes ○ No

If yes, include in description.

The existing first phase of a detention pond will be expanded and will include native landscaping of wetted and riparian areas to provide improved habitats for fish and wildlife.

15 How are you planning to do it? Briefly describe the construction materials, methods and equipment that you plan to use.
(limit of 400 characters)

Have you considered and incorporated all best practices and mitigation measures recommended in relevant guidelines to avoid negative impacts to fish and fish habitat? ○ Yes ○ No

If yes, include a description in 21

A temporary channel will be constructed to divert streamflow around the work area, The propsed pond will be landscaped and otherwise stabilized (e.g. hydroseeded) prior to the streamflow being reintroduced to the pond area.

16 Include a site plan (figure/drawing) showing all project components in and near water.

Are details attached? ◉ Yes ○ No

17 Implementation schedule and proposed project timing:

What is the start and end date for the proposed project: YYYY/MM/DD 2014/08/01 *to* YYYY/MM/DD 2016/09/1

What is the schedule of all proposed work activities? *(limit of 300 characters)*

All instream activities would be restricted tot he period August 1 through September 15 of the years 2014 through 2016. Diversion of flow may occur in one year, with pond construction and landscaping occuring over the fall, winter and spring months, with re-diversion of flow occuring next year.

18 Will you follow the appropriate Timing Windows for all activities below the High Water mark?

◉ Yes ○ No

If no, why not? *(limit of 300 characters)*

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Description of the Proposed Development *(continued)*

19 **Indicate the extent of the area (in square metres) that your project will affect in and/or near water.** Identify if areas would be temporarily and/or permanently affected. *(limit of 400 characters)*

A previously issued (1999) DFO Authorization (99-HPAC-PA2-000-000217) had been extended to 2012. All compensation habitats were completed by 2006. The authorized works totalled 40,116 sq. metres. The proposed/revised works total 75,127 sq. metres.

20 **Will you be withdrawing or discharging water?** ○ Yes ◉ No

If so, identify your water source and describe the volume and rates. *(limit of 400 characters)*

Description of the Proposed Fish and Fish Habitat Protection Measures

21 **Outline all the measures and practices that you will apply to avoid and/or minimize impacts to the aquatic environment. List appropriate Operational Statements and/or Best Management Practices.** *(limit of 900 characters)*

The work area will be isolated from flowing waters by diverting flow around the area. Waters that collect in the work area (i.e. rainwater) will be suitably trated to ensure sediment content is acceptable. All work will be subject to an Erosion and Sediment Control permit to be issued by the Township of Langley.

s.19(1)

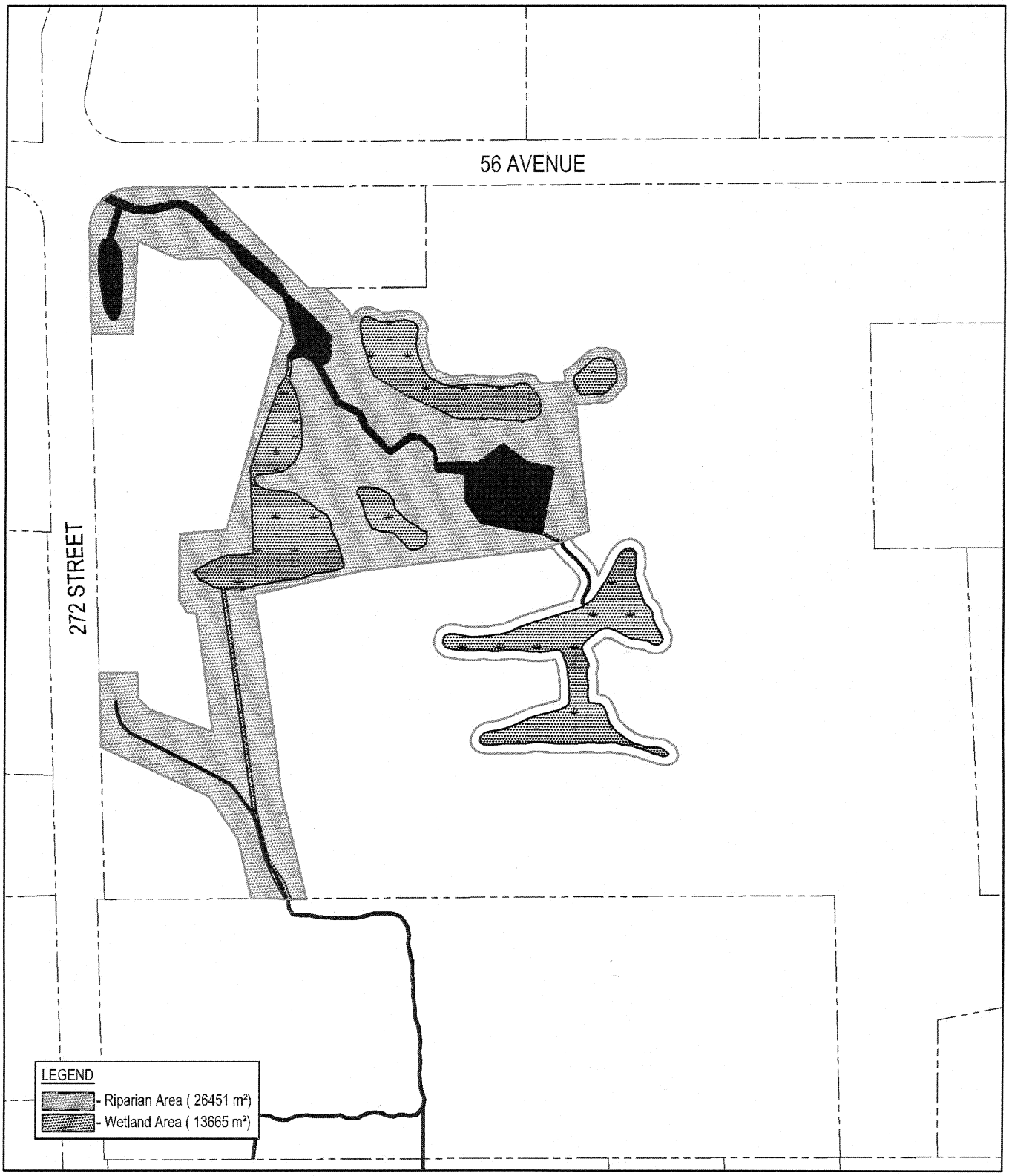
22 I, _____ (print name) certify that the information given on this form is to the best of my knowledge correct and completed.

2013/08/26

Date (YYYY/MM/DD)

Information about the above-noted proposed work or undertaking is collected by DFO under the authority of the *Fisheries Act* for the purpose of administering the fish habitat protection provisions of the *Fisheries Act*. Personal information will be protected under the provisions of the *Privacy Act* and will be stored in the Personal Information Bank number DFO PPU 080. Under the provisions of the *Privacy Act*, individuals have a right to, and on request shall be given access to any personal information about them contained in a personal information bank. Instructions for obtaining personal information are contained in the Government of Canada's Info Source publications available at www.infosource.gc.ca or in Government of Canada offices. Information other than "personal" information may be accessible or protected as required by the provision of the *Access to Information Act*.

Document Released Under the Access to Information Act / Document divulgué en vertu de la Loi sur l'accès à l'information.



REFERENCE DRAWINGS

1. Drawing No. 467-02-12. Rev.05. "Ultimate Drainage". May 2000. Envirowest Consultants Inc.
2. Email: 0921_001.pdf. July 02, 2013; Aplin and Martin Consultants Ltd.

GLOUCESTER INDUSTRIAL ESTATES
Langley, BC

BIO-INVENTORY ASSESSMENT
Langley, BC

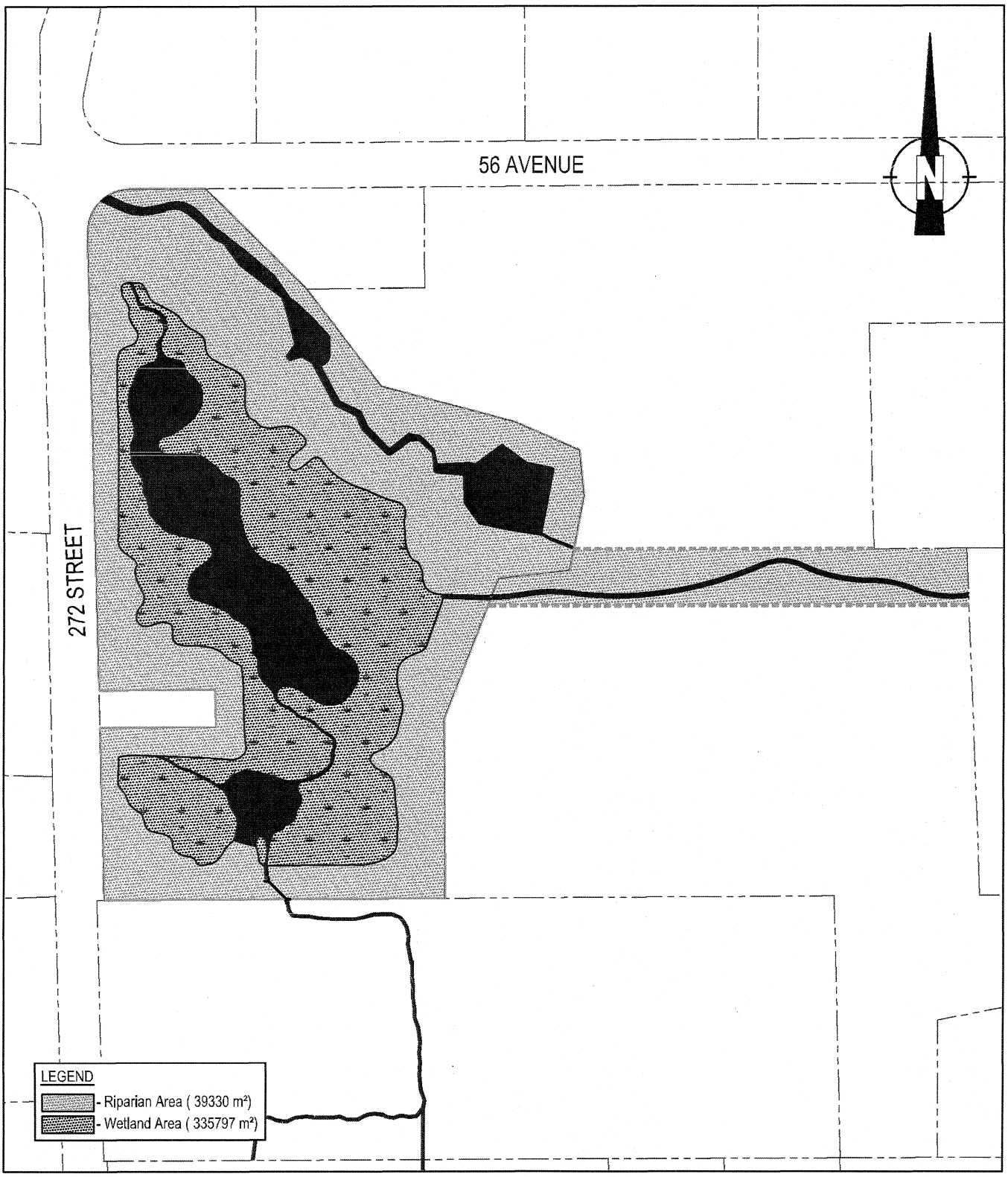
envirowest consultants inc.
Suite 101 - 1515 Broadway Street
Port Coquitlam, British Columbia
Canada V3C 6M2
office: 604-944-0502
facsimile: 604-944-0507
www.envirowest.ca

ULTIMATE DRAINAGE - PER AUTHORIZATION

DESIGN:	DRAWN:	CHECKED:	REVISION:	REVISION DATE:
IWW	CEV	IWW	00	
SCALE: As Shown			DRAWING NUMBER: FIGURE 1A	
DATE: August 26, 2013				

DATE: 2013-08-26 - 10:33am
PATH: W:\Projects\envirowest files\2013\Langley\467-02\AutoCAD\Final\Figure 1A -1B.dwg
LAYOUT: FIGURE 1A

Document Released Under the Access to Information Act / Document divulgué en vertu de la Loi sur l'accès à l'information.



REFERENCE DRAWINGS

1. Drawing No. 467-02-12. Rev.06. "Ultimate Drainage". April 2002. Envirowest Consultants Inc.
2. Email: 0921_001.pdf. July 02, 2013; Aplin and Martin Consultants Ltd.

GLOUCESTER INDUSTRIAL ESTATES Langley, BC	envirowest consultants inc. Suite 101 - 1515 Broadway Street Port Coquitlam, British Columbia Canada V3C 6M2 office: 604-944-0502 facsimile: 604-944-0507 www.envirowest.ca	ULTIMATE DRAINAGE - PROPOSED
BIO-INVENTORY ASSESSMENT Langley, BC	DESIGN: IWW; DRAWN: CEV; CHECKED: IWW SCALE: As Shown DATE: August 26, 2013	REVISION: 00; REVISION DATE: DRAWING NUMBER: FIGURE 1B

DATE: 2013-08-26 - 10:33am
PATH: I:\Alpha\envirowest files\2013\Langley\467-02\AutoCAD\Final\Figure 1A-1B.dwg
LAYOUT: FIGURE 1B

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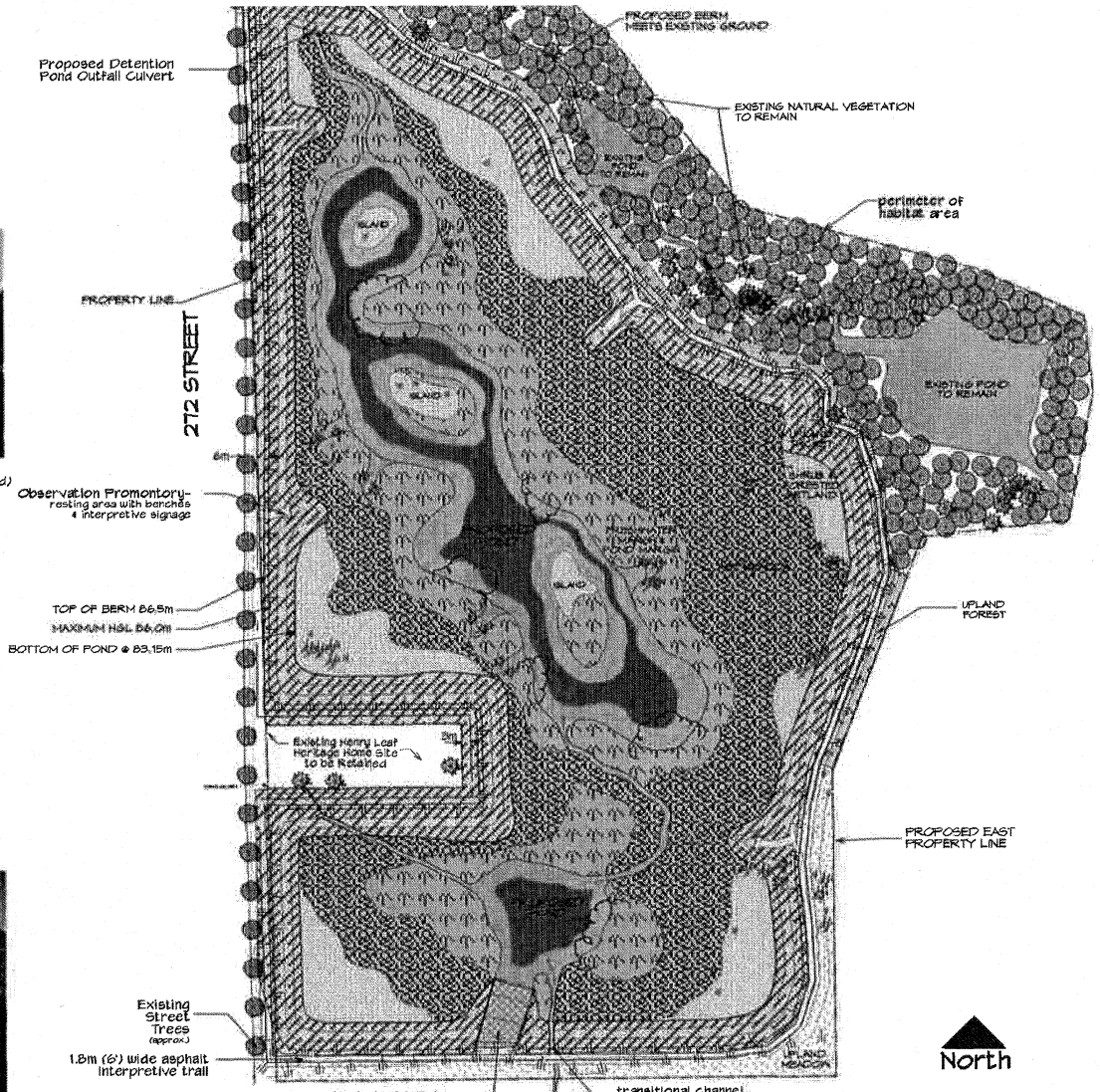
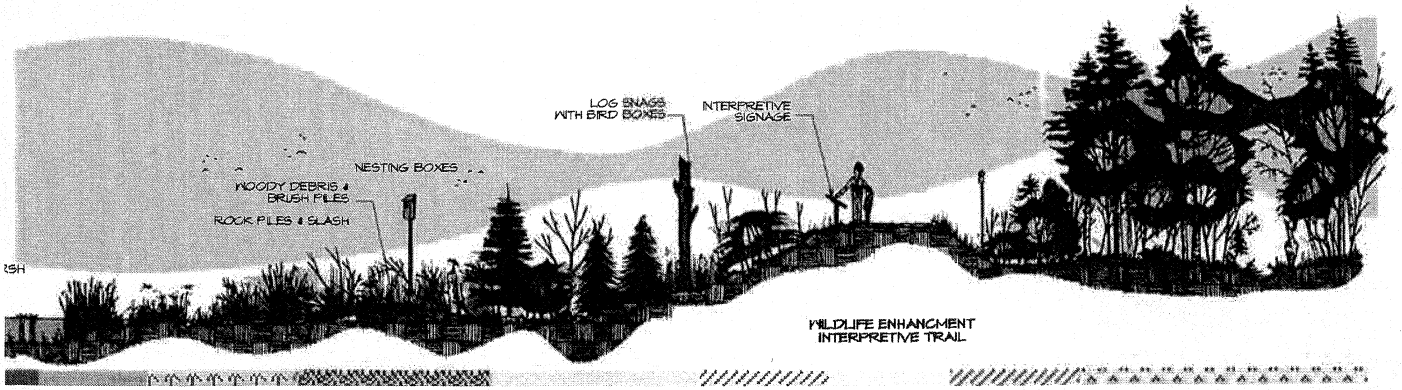
FRESHWATER MARSH (foreground)
DECIDUOUS WOODLAND (background)

MARSH WITHIN POND





Salmonberry	(Rubus spectabilis)	Pacific Tree F
Red Elderberry	(Sambucus racemosa)	**Birds**
Sword Fern	(Polystichum munitum)	Black-cappe
UPLAND THICKET AREAS (including slopes)		**Mammals**
Black Hawthorn	(Crataegus douglasii)	Coast Mole
Black Gooseberry	(Ribes lacustre)	**Birds**
Saskatoon	(Amelanchier alnifolia)	Cedar Waxwir
Red Flowering Currant	(Ribes sanguineum)	Song Sparrou
Pacific Ninebark	(Physocarpus capitatus)	White-crowne
UPLAND MEADOW AREAS		**Mammals**
Perennial grasses & wildflowers		Deer Mouse
		Coyote
		Birds
		Red-tailed Ha
SHRUB AND FORESTED WETLAND AREAS		**Mammals**
Western Red Cedar	(Thuja plicata)	American Mink
Sitka Spruce	(Picea sitchensis)	Raccoon
Black Cottonwood	(Populus trichocarpa)	Townsend's V
Red-Osier Dogwood	(Cornus stolonifera)	Pacific Water
Willow spp.	(Salix spp.)	**Amphibians**
Stink Currant	(Ribes bracteosum)	Western Toad
Slough Sedge	(Carex obnupta)	
Skunk Cabbage	(Lysichiton americanum)	
WET MEADOW AREAS		**Mammals**
Pacific Crabapple	(Pyrus fusca)	Raccoon
Red-Osier Dogwood	(Cornus stolonifera)	Townsend's V
Nootka Rose	(Rosa nutkana)	Pacific Water
Lady Fern	(Athyrium filix-femina)	
Small Fruited Bulrush	(Scirpus microcarpus)	**Birds**
Wooly Bulrush	(Scirpus cyperinus)	Northern Harr
Common Rush	(Juncus effusus)	
Reed mannagrass	(Glyceria grandis)	
FRESH WATER MARSH AND POND MARGIN AREAS		**Mammals**
Cattail	(Typha latifolia)	Raccoon
Soft-stemmed Bulrush	(Scirpus validus)	Townsend's V
Arrowhead	(Sagittaria latifolia)	Common Musk
		Amphibians
		Western Toad
		Long-toed Sa
		Birds
		Great Blue He
		Virginia Rail
		Marsh Wren
		Red-winged E
POND AREAS		**Mammals**
		Common Musk
		Little Brown I
		Amphibians
		Northwestern
		Bullfrog
		Birds
		Mallard
		Gadwall
		Hooded Merg
		American Coo

LEGEND

- 1.8m (6') WIDE PERIMETER INTERPRETIVE TRAIL
- OBSERVATION PROMONTORY
- BENCHES
- WILDLIFE LOGS (snags)
- TREE TOPS, EX (provides shade & cov
- ROCK WOOI

000313

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From: XPAC Referrals Pacific
Sent: Tuesday, August 27, 2013 3:48 PM
To: Bergsma, Ian
Subject: 2013-08-26 Consultant Request

s.19(1)

From: [redacted]
Sent: 2013–August-26 2:17 PM
To: XPAC Referrals Pacific
Subject: RE: Out of Office AutoReply: Gloucester Detention Pond

Once this file is assigned, please have the biologist contact me regarding one additional request. Thanks.

[redacted]
604-944-0502 ext. [redacted]
[redacted]
604-944-0507
Suite 101 - 1515 Broadway Street
Port Coquitlam, British Columbia
Canada V3C 6M2
envirowest consultants inc.
www.envirowest.ca

From: XPAC Referrals Pacific [mailto:ReferralsPacific@dfo-mpo.gc.ca]
Sent: Monday, August 26, 2013 10:50 AM
To: [redacted]
Subject: Out of Office AutoReply: Gloucester Detention Pond

This confirms that Fisheries and Oceans Canada, Ecosystem Management Branch – Fisheries Protection Program has received your email.

Note: All project submissions require completion of a Project Notification and Review Application Form. Incomplete application forms will be returned and may result in delayed review and requests from DFO for more information. The form is available online at: www.pac.dfo-mpo.gc.ca/habitat/steps/praf/form-formulaire-eng.pdf. Complete directions on completing the form are provided at: www.pac.dfo-mpo.gc.ca/habitat/steps/praf/guide-eng.htm. For more information on DFO's project review process and other project planning resources, please visit our Working Near Water in BC and Yukon website: www.pac.dfo-mpo.gc.ca/habitat/know-savoir-eng.htm.

If your submission is a "Notification to DFO," this means impacts to fish and fish habitat will be avoided through project design and appropriate mitigation measures. You will not receive further comments from DFO, although we may monitor or audit your project.

If your submission is a "Request for Project Review" or "Request for a Fisheries Act Authorization," it may take up to 10 business days for your project to be assigned to a Fisheries Protection Biologist. Please do not contact us for a status update on your project review during this 10-day period.

If you have questions about DFO's regulatory process or need general information, contact DFO Headquarters toll free: 1-866-845-6776 or email: EnquiriesPacific@dfo-mpo.gc.ca.

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From: [redacted]
Sent: Thursday, August 29, 2013 9:09 AM
To: Bergsma, Ian
Subject: 2013-08-29 Gloucester Pond
Attachments: Geosource 2.pdf **s.19(1)**

Hi Ian,

My apologies .... I should have checked it before I sent it (my saved copy would not open either). I have re-created the image from Langley's website and attach it here.

Also, I sent a follow up e-mail in which I asked to be contacted about an issue related to this file. The works covered under the original DFO Authorization (and several amendments) are specifically exempted from the provisions of Township's Streamside Protection Bylaw. As such, we request that the approval documentation for the subject works be either provided as a further amendment of the existing Authorization, or at least reference the Authorization number (i.e. issue a Letter of Advice with a new file number but cross-reference it to the Authorization number). Let me know if this requires further clarification.

[redacted]

[redacted] 604-944-0502 ext. [redacted]
[redacted] 604-944-0507
Suite 101 - 1515 Broadway Street
Port Coquitlam, British Columbia
Canada V3C 6M2

envirowest consultants inc.
www.envirowest.ca

From: Bergsma, Ian [mailto:Ian.Bergsma@dfo-mpo.gc.ca]
Sent: Wednesday, August 28, 2013 10:06 AM
To: [redacted]
Subject: RE: Gloucester Detention Pond

Hi [redacted]

I am currently doing the initial processing of your submission. Could you please send me the attachment 'aerial - detention pond' as it is damaged and will not open.

Thanks,

Ian Bergsma
Fisheries Protection Biologist
Triage & Planning Unit
Fisheries Protection Program

From: [redacted]
Sent: August-26-13 10:48 AM
To: XPAC Referrals Pacific
Subject: Gloucester Detention Pond

Please find attached the following:

Document Released Under the Access to Information Act / Document divulgué en vertu de la Loi sur l'accès à l'information.

1. Project Review application form;
2. Figure showing previously approved (99-HPAC-PA2-000-000217) concept plan with total habitat areas, and figure showing currently proposed total habitat areas;
3. Aerial photograph of interim detention pond approved by DFO;
4. Plan of habitat features to be included in proposed pond. **s.19(1)**

Please contact me if you have any questions.

[redacted]
Phone: 604-944-0502 ext. [redacted]
Email: [redacted]
Facsimile: 604-944-0507
Suite 101 - 1515 Broadway Street
Port Coquitlam, British Columbia
Canada V3C 6M2

envirowest consultants inc.
www.envirowest.ca

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Document Released Under the Access to Information Act / Document divulgué en vertu de la Loi sur l'accès à l'information.

Fisheries and Oceans Canada | Pêches et Océans Canada

200 – 401 Burrard St.,
Vancouver, BC, V6C 3S4

Your file *Votre référence*

October 3, 2013

Our file *Notre référence*
99-HPAC-PA2-00217

s.19(1)

161884 Canada Inc.
Gloucester Industrial Estates
310 - 1001 West Broadway
Vancouver, B.C.
V6H 4B1

Dear

Subject: Request for amendment to Fisheries Act Authorization.

DFO File No.: **99-HPAC-PA2-00217**
Title:

On August 26, 2013, the following documents were submitted to DFO for review by envirowest consultants inc.

1. Project Review application form;
2. Figure showing previously approved (99-HPAC-PA2-000-000217) concept plan with total habitat areas, and figure showing currently proposed total habitat areas;
3. Aerial photograph of interim detention pond approved by DFO;
4. Plan of habitat features to be included in proposed pond.

"The configuration of the constructed habitat may be revised subject to advance notifcation to DFO and completion of a similar or greater amount of habitat."

Our review consisted of:

5. Project Review application form;
6. Figure showing previously approved (99-HPAC-PA2-000-000217) concept plan with total habitat areas, and figure showing currently proposed total habitat areas;
7. Aerial photograph of interim detention pond approved by DFO;
8. Plan of habitat features to be included in proposed pond.

If the plans have changed or if DFO's understanding of your project is inaccurate, you should contact DFO to determine if the advice in this letter still applies.

If you have any questions please contact the undersigned.

Canada

.../2

Document Released Under the Access to Information Act / Document divulgué en vertu de la Loi sur l'accès à l'information.

Yours sincerely,

Karen Billard

Fisheries Protection Program / Programme de protection des pêches
Ecosystem Management Branch / Gestion des écosystèmes
Phone/ téléphone: 604-666-0126
Fax / télécopieur: 604-666-0417
s.19(1) E-mail/Courriel: karen.billard@dfo-mpo.gc.ca

copy: [redacted] ENVIROWEST

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Fisheries and Oceans Canada | Pêches et Océans Canada

200 – 401 Burrard St.,
Vancouver, BC, V6C 3S4

Your file *Votre référence*

October 8, 2013

Our file *Notre référence*
99-HPAC-PA2-00217

s.19(1)

161884 Canada Inc.
Gloucester Industrial Estates
310 - 1001 West Broadway
Vancouver, B.C.
V6H 4B1

Dear

Subject: Request for amendment to Fisheries Act Authorization.

DFO File No.: **99-HPAC-PA2-00217**
Title: Glocester Industrial Estates

On August 26, 2013, the following documents were submitted to DFO for review by envirowest consultants inc.:

- Project Review Application Form;
- Figure showing previously approved (99-HPAC-PA2-000-000217) concept plan with total habitat areas, and figure showing currently proposed total habitat areas;
- Aerial photograph of interim detention pond approved by DFO;
- Plan of habitat features to be included in proposed pond.

DFO accepts the plans as submitted.

Fisheries Act Authorization 99-HPAC-PA2-00217 states, "The configuration of the constructed habitat may be revised subject to advance notification to DFO and completion of a similar or greater amount of habitat." Therefore, an amendment will not be required.

In regard to the valid period of the Authorization, the dates are hereby extended to include 2014 and 2015.

If the plans have changed or if DFO's understanding of your project is inaccurate, you should contact DFO to determine if the advice in this letter still applies.

If you have any questions please contact the undersigned.

Yours sincerely,

Karen Billard

Fisheries Protection Program / Programme de protection des pêches
Ecosystem Management Branch / Gestion des écosystèmes
Phone/ téléphone: 604-666-0126
Fax / télécopieur: 604-666-0417
E-mail/Courriel: karen.billard@dfo-mpo.gc.ca

copy: envirowest consultants inc.

Canada

Pages 321 to / à 362

are withheld pursuant to sections

sont retenues en vertu des articles

20(1)(b), 21(1)(b), 20(1)(c)

of the Access to Information Act

de la Loi sur l'accès à l'information

Document Released Under the Access to Information Act / Document divulgué en vertu de la Loi sur l'accès à l'information.

From: Johal, Sharan
Sent: August-11-16 8:17 AM
To: Engelsjord, Michael; Rotinsky, Brenda
Cc: Fanos, Brad; Webb, Cheryl; Mercier, Liliane
Subject: FW: URGENT INFORMAL - TIME SENSITIVE: Fisheries Issue
Attachments: West Creek Background.pdf; Restrictive Covenant.pdf; TOL presentation.pdf; geo features map.pdf; Langley Field Naturalist Report.pdf; reference plan.pdf

Importance: High

Hi Michael and Brenda,

Please provide a response by no later than 11:00 today if not sooner. I just got off the phone with Ottawa and it sounds as though the trucks have already started to move.

Ottawa is asking if we provided authorization as well as some background.

Please contact the MP and report back to me.

Thank you,
Catherine

Catherine Dickie
for
Sharan Johal
Team Leader | Chef d'équipe
Executive Secretariat | Secrétariat Exécutif
Regional Director General's Office | Bureau du Directrice Général Regional
Fisheries and Oceans Canada | Pêches et Océans Canada
Suite 200 - 401 Burrard Street | 401, rue Burrard, Pièce 200
Vancouver, BC V6C 3S4 | Vancouver, (C.-B.) V6C 3S4
Telephone/Téléphone: (604) 666-7102 | Fax/Télécopier: (604) 666-8956
Email/Courriel: Sharan.Johal@dfo-mpo.gc.ca

From: Waddell, Mark
Sent: August-11-16 8:11 AM
To: Johal, Sharan
Cc: Richter, Julie; Butcher, Ashley; Hopkins, Lillian; Martel, Robyne; Patrick, Lindsey
Subject: URGENT INFORMAL - TIME SENSITIVE: Fisheries Issue
Importance: High

Good Morning,

Could the region please follow up with MP Aldag in regards to this matter ASAP and provide a report back to MINO – please include info on whether or not authorizations were issued for this as well.

Thanks,
M

From: Aldag, John - Personal [mailto:John.Aldag.P9@parl.gc.ca]
Sent: August 9, 2016 8:39 PM

Document Released Under the Access to Information Act / Document divulgué en vertu de la Loi sur l'accès à l'information.

To: Min@dfo-mpo.gc.ca
Subject: A Fisheries Issue

Minister LeBlanc (Dominic): Welcome back to the West Coast. Sorry that I couldn't join you at the volunteer event last evening or any of your good-news announcements yesterday and today but constituency work dominates my calendar this week.

I'm contacting you about a fisheries issue in the riding adjacent to mine. The adjacent riding is Langley – Aldergrove and is held by Mark Warawa, Conservative MP. A local environmental group contacted me last week while Mark was out of the country to express concern about development that is planned in the Township of Langley that could have significant impacts on a salmon-bearing stream that feeds into the Fraser River. The Township of Langley recently approved a development permit for a truck storage area and alteration of existing detention ponds to collect and slowly release water from this development adjacent to existing industrial lands that border West Creek. West Creek was previously designated both federally and provincially as a sensitive stream, which should provide the highest standards guiding development adjacent to these streams. I've so far been unable to confirm whether West Creek retains this designation or if it lost the designation due to changes made by the previous government to CEAA and the Fisheries Act. There might also be a restrictive covenant on the lands being developed but I haven't yet been able to confirm if that is the case.

Today I received a call that equipment was being mobilized to the area, to begin work on lands to be developed and adjacent detention ponds. A concerned municipal councilor called to enquire if I could contact Fisheries and Oceans staff to confirm whether they received an application to review this work and to find out what level of awareness and involvement they have had on this file. I called every number listed online for Fisheries on the West Coast but received voicemail on all but one. I left messages but noted the service standard seems to be 2 days for the return of any calls. I spoke with one DFO employee at the Observe, Record and Report line but was told that she could not do anything if habitat destruction wasn't happening, and if it was, could only pass the concern along to DFO.

I'm hoping to speak with a representative from your department to determine if DFO is aware of this development issue adjacent to West Creek and if they have reviewed the application or issued any direction for work in and around West Creek. It will be extremely unfortunate if a salmon-bearing stream and its headwaters are impacted or destroyed within a few hours of your press conference noting that our government is working to protect the Fraser River salmon stocks.

I'm attaching a bit of the background information that I was given at the meeting last week and would appreciate it if you could forward this to your West Coast office and have them give me a call to discuss this file. I'm hoping DFO is on top of this file but would like to confirm that is the case. Note that Mark Warawa is also aware of this file and will likely monitor our government's response to this issue.

Any assistance you can provide in getting me in touch with your department would be appreciated. My constituency office number is 604-575-6595 and my personal cell is [redacted] should anyone be available to call me in the next day or two.

Thanks. s.19(1)

John Aldag
Cloverdale – Langley City

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Background/ History

In late 1979 Gloucester lands were removed from the ALR with the condition that 128 acres be preserved for golf course/green space

- 1988 Council adopted original Gloucester Community Plan
- 1988 Original Gloucester/ Township Development Agreement entered into with amendments in 1990, 1992,1993 and 1996

- 1990 designation of all lands within the plan as mandatory Development Permit areas and addition of Dev. Permit Guidelines to the text of the Community Plan
- 1990 revisions to commercial designations and golf course layout in the SE quadrant of the industrial park (south of 56th Ave. and east of 272nd)

- 1999 revisions to scope of commercial uses permitted adjacent to 264th interchange and to decrease the area of the proposed golf course from 128 acres to 90.1 acres. The loss of these 38 acres was to be offset by creating increased buffers. Almost all new development has been granted REDUCED buffers and minimal set back requirements.

-2002 Gloucester presented its plan for the "ultimate detention pond"

-2004 current detention ponds were dug, precluding any eventual creation of a golf course

- 2004 (January 26th) Bylaw 4239 was proposed that would have converted 46.3 acres of Golf course to Service General Industrial and made the detention pond to the east of 272nd street and south of 56th avenue, larger and 2meters deeper (the "ultimate detention pond" plan) .This By-Law was abandoned in 2014.

-2009 (May 11th) development permit application No.100556 for Beedie construction was granted to allow construction of EV logistics 396,000 sq. ft. cold storage building at 5016 272nd St.

-2016 (July 11th) development permit No. 100830 was issued to facilitate development of a truck parking/trailer storage/staging facility at 2700 block of 48th avenue. This is adjacent , just to the north, of EV logistics cold storage building. Both of these developments back onto West Creek on their eastern property lines with covenants in place.

Summary:

These projects and many others in Gloucester Industrial Estates now have their storm-water flowing into West Creek and passing through the detention pond down stream. However the detention pond enlargement proposed under Bylaw 4239 was abandoned in

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2014 and creating larger and deeper ponds now would destroy the sensitive wetlands that form the headwaters of West Creek. Engineers and the DFO need to be aware of the capacity of the present day detention ponds and require, if necessary, that the Storm-water generated from these new developments be accommodated on their own sites. The recent fish kill (July 2016) shows that the salmon are thriving in West Creek and they should have the highest standards of protection possible. As West Creek is designated both provincially and federally as a Sensitive Stream, the highest standards of the DFO and Environment Canada should be strictly adhered to when ANY development is proposed for this area.

West Creek Awareness August 2016

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21 DEC 2006 13 46 BA602672

s.19(1)

LAND TITLE ACT
FORM C
(Section 233)
Province of British Columbia
GENERAL INSTRUMENT – PART 1 (This area for Land Title Office use) Page 1 of 9 pages

1. APPLICATION: (Name, address, phone number and signature of applicant, applicant's solicitor or agent)
[redacted]
McCarthy Tétrault LLP
1300-777 Dunsmuir Street, Vancouver, B.C. V7Y 1K2
Phone: (604) 643-7100 Client No. 010452

2. PARCEL IDENTIFIER(S) AND LEGAL DESCRIPTION(S) OF LAND:
(PID) (LEGAL DESCRIPTION)
See Schedule

3. NATURE OF INTEREST:*

DESCRIPTION	DOCUMENT REFERENCE (PAGE AND PARAGRAPH)	PERSON ENTITLED TO INTEREST
Section 219 Covenant over part shown on Plan BCP 27809	**Pages 3 to 10**	**Transferee**

~~15 06/12/21 13:48:21.05 LH 750052~~
CHARGE ~~$65.20~~

4. TERMS: Part 2 of this instrument consists of (select one only):
(a) Filed Standard Charge Terms ☐ D.F. Number:
(b) Express Charge Terms ☒ Annexed as Part 2
(c) Release ☐ There is no Part 2 of this instrument.
A selection of (a) includes any additional or modified terms referred to in Item 7 or in a schedule annexed to this instrument. If (c) is selected, the charge described in Item 3 is released or discharged as a charge on the land described in Item 2.

5. TRANSFEROR(S):*
161884 CANADA INC., (Reg No. A28204)

TRANSFEREE(S): (including postal address(es) and postal code(s)):*
HER MAJESTY THE QUEEN IN RIGHT OF THE GOVERNMENT OF CANADA, as represented by the Minister of Fisheries and Oceans or other designate, 100 Annacis Parkway, Delta, BC V3M 6A2

7. ADDITIONAL or MODIFIED TERMS:*
N/A

8. EXECUTION(S):** This instrument creates, assigns, modifies, enlarges, discharges or governs the priority of the interest(s) described in Item 3 and the Transferor(s) and every other signatory agree to be bound by this instrument, and acknowledge(s) receipt of a true copy of the filed standard charge terms, if any.

[redacted]
Barrister & Solicitor
McCarthy Tétrault LLP
1300 – 777 DUNSMUIR STREET
VANCOUVER, B.C. V7Y 1K2
DIRECT [redacted]

Execution Date		
Y	M	D
06	7	14

USE BLACK INK ONLY
Party(ies) Signature(s)

161884 CANADA INC.
[redacted]

OFFICER CERTIFICATION: Your signature constitutes a representation that you are a solicitor, notary public or other person authorized by the *Evidence Act*, R.S.B.C. 1996, c.124, to take affidavits for use in British Columbia and certifies the matters set out in Part 5 of the *Land Title Act* as they pertain to the execution of this instrument.
* If space insufficient, enter "SEE SCHEDULE" and attach schedule in Form E.
** If space insufficient, continue executions on additional page(s) in Form D.

181202-366647
McCarthy Tétrault LLP VDO_DOCS #1524228 v. 1

DYE & DURHAM CLIENT No. 11061 - 217
SURVEY DE.

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LAND TITLE ACT
FORM D

EXECUTIONS CONTINUED

USE BLACK INK ONLY Officer Signature(s)	Execution Date Y M D	USE BLACK INK ONLY Party(ies) Signature(s)
J Cavacece Juno Cavacece A Commissioner for taking Affidavits in British Columbia FISHERIES & OCEANS CANADA 100 Annacis Parkway, Unit 3 Delta, BC V3M 6A2	06 06 21	**HER MAJESTY THE QUEEN IN RIGHT OF THE GOVERNMENT OF CANADA**, as represented by The Minister of Fisheries and Oceans Canada by his designated representative: Print Name: Corino Salomi

OFFICER CERTIFICATION: Your signature constitutes a representation that you are a solicitor, notary public or other person authorized by the *Evidence Act*, R.S.B.C. 1996, c.124, to take affidavits for use in British Columbia and certifies the matters set out in Part 5 of the *Land Title Act* as they pertain to the execution of this instrument.

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McCarthy Tétrault LLP VDO_DOCS #1524228 v. 1

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LAND TITLE ACT
FORM E

SCHEDULE Page 3 of 9 pages

ENTER THE REQUIRED INFORMATION IN THE SAME ORDER AS THE INFORMATION MUST APPEAR ON THE FREEHOLD TRANSFER FORM, MORTGAGE FORM OR GENERAL DOCUMENT FORM.

2. PARCEL IDENTIFIER(S) AND LEGAL DESCRIPTION(S) OF LAND:

(PID)	(LEGAL DESCRIPTION)
011-294-116	**Lot 3 except: part subdivided by Plan 84596; Sec 5 Tp 14 NWD Plan 8152**
016-833-414	**Lot 5 Sec 5 Tp 14 NWD Plan NWP87490**
025-502-794	**Lot 6 except: Firstly; part subdivided by Plan BCP10415 Secondly; part subdivided by Plan BCP16511 Thirdly; part subdivided by Plan BCP21109 Sec 5 Tp 14 NWD Plan BCP1615**

181202-366647
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LAND TITLE ACT

TERMS OF INSTRUMENT – PART 2 Page 4 of 9 pages

RESTRICTIVE COVENANT
(SECTION 219 LAND TITLE ACT)

THIS AGREEMENT made the _____ day of _____, 2006,

BETWEEN:

161884 CANADA INC., Reg. no. A28204, of
300-1001 West Broadway, Vancouver, BC V6H 4B1

(the "Covenantor")

OF THE FIRST PART

AND:

HER MAJESTY THE QUEEN IN RIGHT OF THE GOVERNMENT OF CANADA, as represented by the Minister of Fisheries and Oceans or other designate, 100 Annacis Parkway, Delta, BC V3M 6A2

(the "Covenantee")

OF THE SECOND PART

WHEREAS:

A. The Covenantor is the registered owner of ALL AND SINGULAR that certain parcel or tract of land and premises situate, lying and being in the Municipality of Langley, in the Province of British Columbia, and more particularly known and described as follows:

PID:	Legal Description:
011-294-116	Lot 3 except: part subdivided by Plan 84596; Sec 5 Tp 14 NWD Plan 8152
016-833-414	Lot 5 Sec 5 Tp 14 NWD Plan NWP87490
025-502-794	Lot 6 except: Firstly; part subdivided by Plan BCP10415 Secondly; part subdivided by Plan BCP16511 Thirdly; part subdivided by Plan BCP21109 Sec 5 Tp 14 NWD Plan BCP1615

(hereinafter called the "said lands").

181202-366647
McCarthy Tétrault LLP VDO_DOCS #1524228 v. 1

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B. Section 219 of the *Land Title Act* provides, *inter alia*, that a covenant, whether of a negative or positive nature, may be registered as a charge against the title to land, in favour of a municipality or the Crown or any person designated by the Minister of Fisheries and Oceans subject to the covenant and that the covenant is enforceable against the Covenantor and the successors in title of the Covenantor.

C. A covenant registrable under Section 219 of the *Land Title Act* may include provisions in respect of the use of land, the use of a building on or to be erected on the lands; that land is to be built on in accordance with the covenant, is not to be built on except in accordance with that covenant or is not to be built on; that land is not to be subdivided unless in accordance with the covenant or is not to be subdivided; and that land or a specified amenity in relation to it be protected, preserved, conserved, maintained, enhanced, restored or kept in its natural or existing state in accordance with the covenant and to the extent provided by the covenant.

D. A tributary (commonly known as West Creek) is situated upon and runs through a portion of the said lands as shown on the plan prepared by A.M. Osman, B.C.L.S. dated May 31, 2006, a reduced copy of which is attached hereto as Schedule "A" and is filed under Plan number BCP 27809.

E. The Covenantor agrees to the restrictions in the use on the use of a portion of the said lands adjacent to the river on the terms and conditions herein provided for.

NOW THEREFORE THIS AGREEMENT WITNESSETH THAT pursuant to Section 219 of the *Land Title Act*, and in consideration of the premises and the mutual covenants and agreements contained herein and other good and valuable consideration and the sum of One Dollar ($1.00) now paid by the Covenantee to the Covenantor (the receipt and sufficiency whereof is hereby acknowledged) the parties hereto covenant and agree that the said lands shall not be used or built on except in accordance with this Covenant as follows:

1. **THE COVENANTOR COVENANTS AND AGREES** with the Covenantee that:

(a) the Covenantor shall not, without the prior written consent of the Covenantee which consent shall be in the Covenantee's sole discretion to consider, cut down, trim, prune, defoliate, alter, remove or in any way tamper with or work on any trees, shrubs, plants, bushes, ground cover, vegetation or any other form of plant life within that portion of the lands within the covenant boundary as outlined in bold lines on Schedule "A", so that the said trees, shrubs, plants, bushes, ground cover, vegetation and other forms of plant life remain in a naturally vegetated state of perpetuity;

(b) the Covenant shall not construct dwelling(s) or permanent structure(s) of any nature within the covenant boundary as outlined in bold lines on Schedule "A";

(c) the Covenantor shall ensure that any clearing and/or excavation done on the said lands shall be completed in such a manner to ensure that the release of silt, concrete, leachate or any other deleterious substances shall not fall into the said

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creek via ditches, storm sewers or overland flow; and shall further ensure that all construction and excavation wastes, overburden, soil or other substances deleterious to aquatic life shall be disposed of or placed in such a manner as to prevent their entry into any watercourse or storm sewer system;

(d) no building, structure, or any part thereof, including any fixed equipment, mobile home or modular home shall be constructed, reconstructed, moved or extended or located or shall take place within the covenant boundary as outlined in bold lines on Schedule "A".

(e) The Covenantor shall, at its sole expense, construct a permanent fence at the covenant boundary between the development area and the covenant area prior to the start of any site development, and such fence shall be constructed of black chain link fencing 1.8 metres (6 feet) in height and posted with visible metal signs indicating that the area is protected by a Section 219 Covenant for the preservation of sensitive fish and wildlife habitat; notwithstanding that a pedestrian access gate will be permitted, provided that such gate shall be no more than 60 cm (24 inches) in width and shall be maintained in a good state of repair by the Covenantor.

2. **IT IS MUTUALLY UNDERSTOOD**, agreed and declared by and between the parties hereto that:

(a) nothing contained or implied herein shall in any way restrict or abrogate and shall not be deemed to restrict or abrogate, the rights and powers of the Covenantee in the exercise of its functions under any public and private statutes, by-laws, orders and regulations, in its absolute discretion, and in accordance with its lawful powers and duties;

(b) the burden of the covenants herein provided for shall run with the lands and will be personal and binding upon the Covenantor during the Covenantor's seisen of or ownership of any interest in the said lands;

(c) except as agreed to by the Covenantee, this Agreement shall be a first charge against the said lands and run with the said lands;

(d) notwithstanding anything to the contrary, the Covenantor shall not be liable under any breach of any covenants and agreements contained herein after the Covenantor ceases to have any further interest in the said lands;

(e) the Covenantor will deliver, after execution hereof, this Agreement to the Covenantee in a form acceptable as a Section 219 Covenant and concurrently such instruments of priority as may be necessary to give this Agreement priority over all charges and encumbrances which may have been registered against the title to the said lands at the time of submitting this Agreement for registration in the applicable Land Title Office, save and except those specifically approved in writing by the Covenantee or in favour of the Covenantee;

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(f) the fee simple estate in and to the said lands will not pass or vest in the Covenantee under or by virtue of these presents and the Covenantor may fully use and enjoy the said lands except only for the requirements provided for in this Agreement;

(g) the Covenantor and its successors and assigns shall at all times indemnify and save harmless the Covenantee from and against all claims, demands, actions, suits, loss, costs, fines, penalties, charges, damages and expenses including legal fees and litigation expenses whatsoever which the Covenantee may incur, suffer or be put to arising out of or in connection with any breach of any covenant or agreement on the part of the Covenantor contained in this Agreement;

(h) the covenants and agreements on the part of the Covenantor and herein provided for have been made by the Covenantor as contractual obligations as well as having been made pursuant to Section 219 and as such will be binding on the Covenantor;

(i) nothing herein provided for shall be deemed to constitute waivers of any lawful requirements with which the Covenantor would otherwise be obligated to comply with;

(j) no amendment of, addition to, or discharge of this Agreement shall be binding upon the parties hereto unless it is in writing and executed by the parties hereto;

(k) if any provision provided for in this Agreement is for any reason held to be invalid, illegal, or unenforceable in any respect, such invalidity, illegality, or unenforceability will not affect any other provision of this Agreement which shall be construed as if such invalid, illegal, or unenforceable provisions had never been contained therein and such other provisions shall be enforceable to the fullest extent permitted by law;

(l) the Covenantee, in addition to its rights under this Agreement or at law, will be entitled to all equitable remedies, including specific performance, injunction and/or declaratory relief to enforce its rights under this Agreement;

(m) the Covenantor shall pay for the preparation and registration, if applicable, of this Agreement together with any concurrent instruments of priority as herein provided for and any amendment, addition or discharge thereof;

(n) this Agreement shall be interpreted according to the laws of British Columbia;

(o) whenever there is a reference to an enactment of the Province of British Columbia that reference shall include any subsequent enactment(s) of the Province of British Columbia of like effect;

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(p) any reference to the Minister of Fisheries and Oceans shall include the Minister of Fisheries and Oceans, the Deputy Minister of Fisheries and Oceans or any other person designated by either said party to act for or on their respective behalf;

(q) whenever the singular, masculine or neuter is used herein, the same shall be construed as meaning the plural, feminine or the body corporate or politic according to the context in which it is used;

(r) the parties hereto shall do and cause to be done all things and execute and cause to be executed all documents which may be necessary to give proper effect to the intention of this Agreement.

(s) this Agreement shall enure to the benefit of and be binding upon the Covenantor, the Covenantee and their respective successors and assigns.

IN WITNESS WHEREOF the parties hereto have executed this Agreement as of the day, month and year first above written.

This is the instrument creating the condition of covenant entered into under Section 219 of the *Land Title Act* by the Covenantor referred to herein and shown on the print of the plan annexed hereto and initialled by me.

Approving Officer for the Municipality of Langley

181202-366647
McCarthy Tétrault LLP VDO_DOCS #1524228 v. 1

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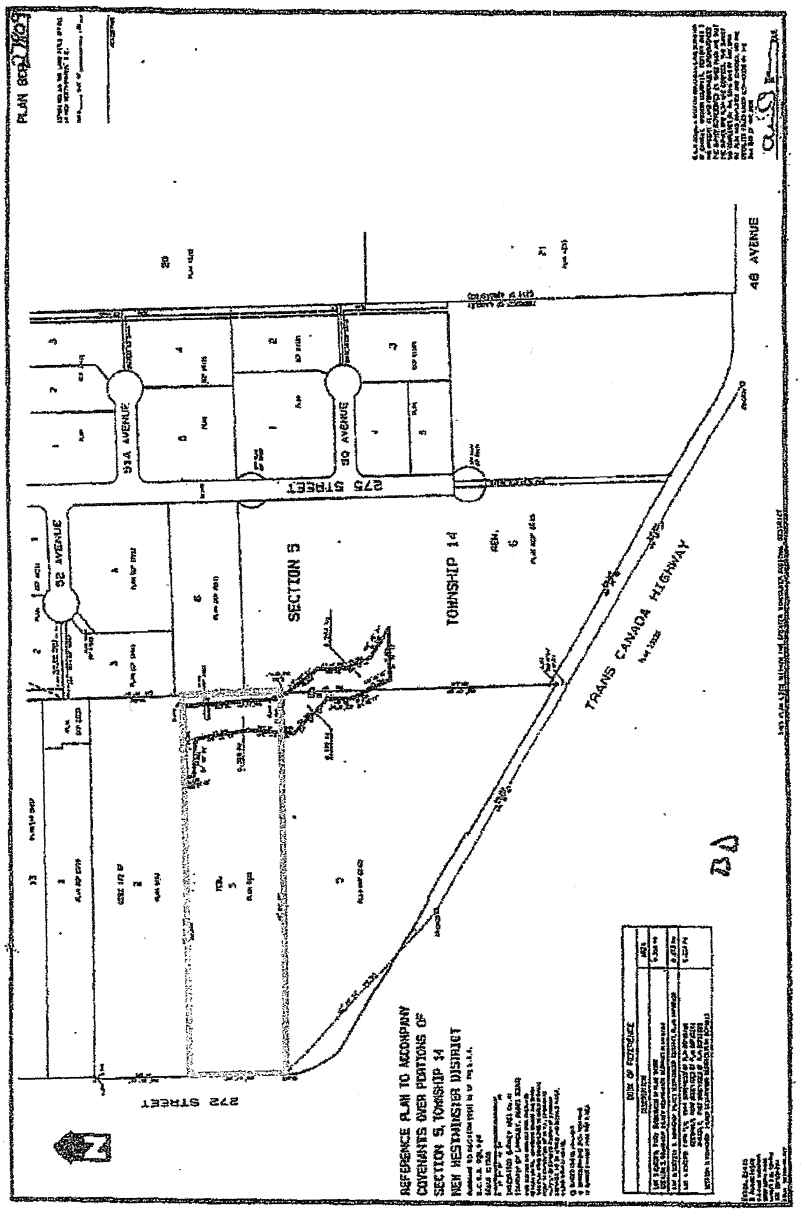
Schedule "A"



- END OF DOCUMENT -

181202-366647
McCarthy Tétrault LLP VDO_DOCS #1524228 v. 1

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Delegation Presentation to Township of Langley Council
July 25, 2016

s.19(1) **Delegate:** [redacted]

Topic of Discussion: **Development Permit Application No. 100830 – Beedie Development Group/ 27200 Block of 48th Avenue Proposed Truck Park**

I would like to thank Council for the adoption of and Integrated Stormwater Management Plan (ISMP) for Gloucester Estates. This step is a step to ensure the continued and sustainable environmental management of the natural resources that lie within this important ecological area of Langley.

The proposed Beedie development permit application that is now back before Council for consideration forms an integral component of the future planning for Gloucester Estates as it borders on West Creek headwaters and is within the ecological preserve as established through the DFO covenant of 1978 that protects and preserves the wetlands adjacent to this parcel. As I stated during my presentation during the Public Hearing for this Application, the adjoining area is also used extensively by the area's wildlife as habitat.

As such, I would ask that Council consider the following environmental requirements as conditions for approval of the Application:

- Protection of the existing wetlands as per the DFO covenant;
- Requirement of the Developer to manage all stormwater within the development footprint and not through the use of the existing wetlands;
- Use of engineered rain gardens to control stormwater runoff within the developed area and;
- Retention of the significant trees (29) that border the proposed development as they provide wildlife cover and habitat.

Council has already taken steps to protect and preserve the stream health of West Creek in the Gloucester area. Through the management

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of stormwater and wastewater from the proposed truck park, Council will be ensuring that this development and all future developments will be undertaken with an emphasis on environmental management, protection of the unique ecosystems that have been viewed and recorded for this area and enhancing the social benefit to all businesses and their staff in the Gloucester area through providing an opportunity to walk and view the abundant wildlife and in-stream fishery that is present in West Creek.

As I stated in my presentation during the Public hearing, I do not oppose development but strongly recommend that it be undertaken in an environmentally sustainable manner to enhance the overall value to the land owners, provide social benefit to the local community and increase the economic base to the Township. Development can ben undertaken using this three-tiered approach to bring developer, community and the environment into partnership for the benefit of all.

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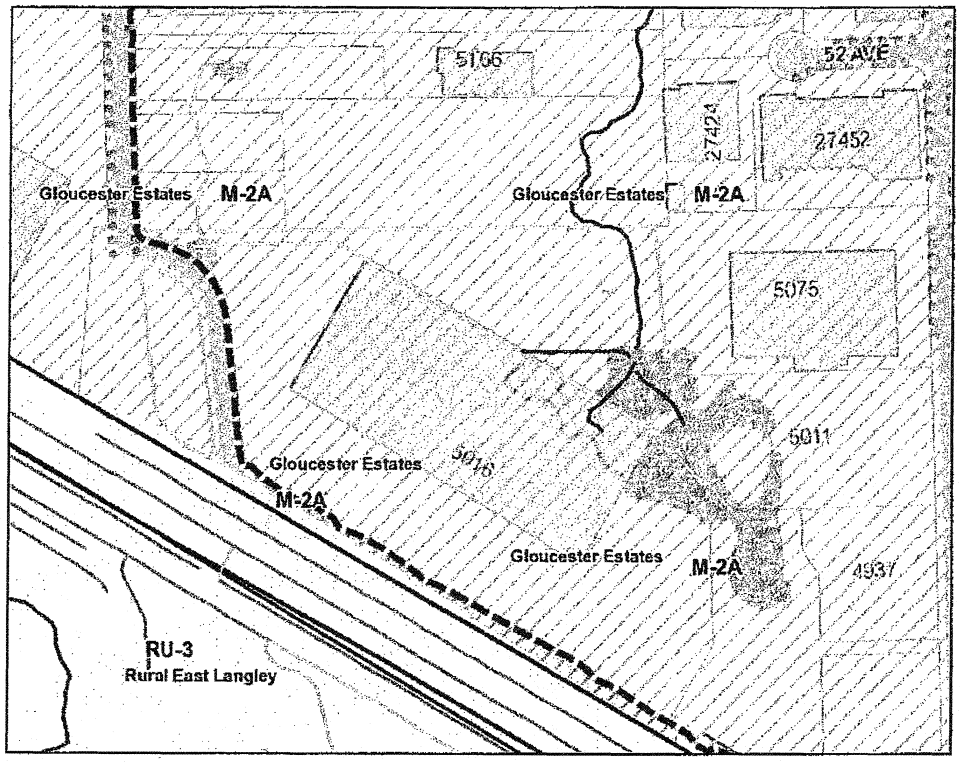

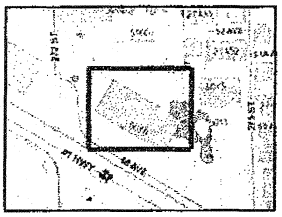

Legend

- Trails

Watercourses 4.0 (Current)

- UNOFFICAL Class 'A' - Red
- UNOFFICAL Class 'A(OD)' - Orange
- UNOFFICAL Class 'A(OW)' - Magen
- UNOFFICAL Class 'B' - Yellow
- UNOFFICAL Class 'C' - Green
- UNOFFICAL Unclassified - Blue
- Non-Refundable Deposit
- Projects

0 100 200 m

N

The data provided is a compilation of geographic information drawn together from a variety of sources, historic and current, and does not necessarily include everything and anything for a particular purpose; and the person utilizing this information does so entirely at their risk as the Township of Langley assumes no obligation or liability for the use of this information by any person and makes no representations or promises regarding the completeness or accuracy of the information or its fitness for a particular purpose.

Map printed on: 14 July 2016 at 11:49:20

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s.19(1)

Langley Field Naturalists

C/O Secretary, 203-9018 208th Street,
Langley, B.C. V1M 2Y8

E-mail: Langleyfieldnaturalists@shaw.ca
Website: www.langleyfieldnaturalists.org

Wednesday, July 20, 2016

Salmon Habitat at Risk

Re: Article by M. Gathercole (Langley Times July 6, 2016).

A recent incident in the wetlands in Gloucester Industrial Estates underlines the importance of the Township's call for an Integrated Storm-water Management Plan (ISWMP) for the entire West Creek watershed. During alterations to a flood control valve, a significant number of salmonids, which are protected under the Fisheries Act, went through a pump and their remains were flushed out onto the bank. The incident was reported to the Department of Fisheries for action and although the harm to these fish could probably have been avoided with some preliminary study of the pond denizens, it confirmed the fact that salmon definitely live and thrive in the streams and tributaries that form the headlands of the sensitive West Creek watershed.

The proposal for a truck parking, trailer storage/staging facility that is currently being considered by the Township is one of the least environmentally friendly uses for land this close to a fish-bearing stream and the wildlife habitat surrounding it . We feel it is imperative that this proposal be put on hold until such time as the ISWMP and all pertinent environmental impact studies are completed. Furthermore, any future development in this important watershed should only be undertaken in accordance with the most current regulations, offering maximum protection for our environment.
We expect excellence!

Langley Field Naturalists

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ITEM 4

Beedie | Development Group

TOWNSHIP OF LANGLEY
JUL 25 2016
DISTRIBUTED TO COUNCIL

s.19(1)

July 22, 2016

Mayor Jack Froese and Council
Township of Langley
20338 – 65 Avenue
Langley, BC V2Z 1N4

Dear Mayor Froese and Council,

We are writing in regards to the letter submitted by [redacted] to the Langley Times dated July 20, 2016. Beedie always strives to adhere to the highest environmental standards and protocols. We work closely with Staff at every municipality within Metro Vancouver to ensure any and all applicable environmental standards set forward on a Municipal, Provincial and Federal level are followed.

Beedie engages best-in-class consultants and professionals to work alongside us on all of our projects to help ensure all standards are met. As a developer working not just in the Township of Langley but throughout all of Metro Vancouver, we take our responsibility to the environment and to our communities very seriously. All of us within Beedie, including our consultants and contractors, live in the communities where we work and we to want the best for the natural habitat and the environment.

[redacted] letter highlights 5525 272nd Street in Gloucester Industrial Park. The nature of this work was to upgrade the existing storm control structure to service the site. For this work, we have, as we always do, engaged third-party professionals to undertake the work and well regarded environmental professionals to secure approvals and monitor the work.

Unfortunately, it would appear that [redacted] letter is correct and some fish were impacted during the upgrading of the structure. We have no explanation as to why this occurred other than this was a honest mistake and it was human error by a person on the job. At no time would any of our team want to impact fish and the environment.

We are conducting a full on site investigation and are engaged in extensive discussions with both our consultant and our contractor to determine why their errors were made. Beedie is also taking steps to make sure this type of incident can never happen

3030 Gilmore Diversion, Burnaby, BC V5G 3B4 office: 604.435.3321 fax: 604.432.7349 beediegroup.ca

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Beedie | Development Group

again. Once the cause of their errors are known, Beedie will be instituting immutable protocols and safeguards.

Beedie Development Group apologizes to the Township of Langley community for the actions of the third party team on site. As the owner and developer of the lands we must accept ultimate responsibility and we do so. Please know we are already underway in taking decisive steps to attempt to rectify the situation and ensure it does not happen again. We will report back to interested members of the community, Council and Staff once we have completed our investigations. We expect this will take approximately 3-5 business days.

Sincerely yours,

BEEDIE DEVELOPMENT GROUP

Ryan Beedie
President

3030 Gilmore Diversion, Burnaby, BC V5G 3B4 office: 604.435.3321 fax: 604.432.7349 beediegroup.ca

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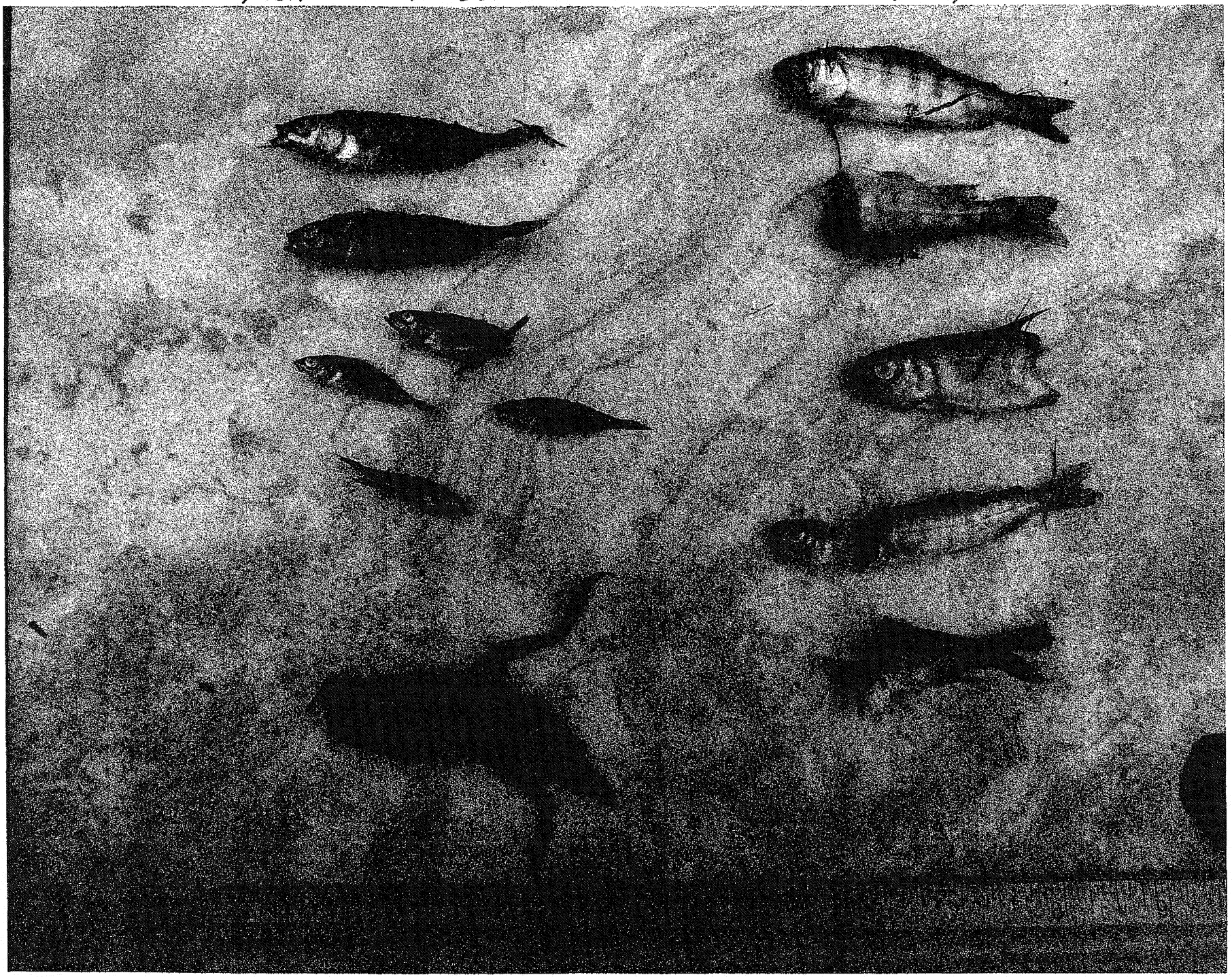
Fish Kill @ Detention control Valve July 15, 2016



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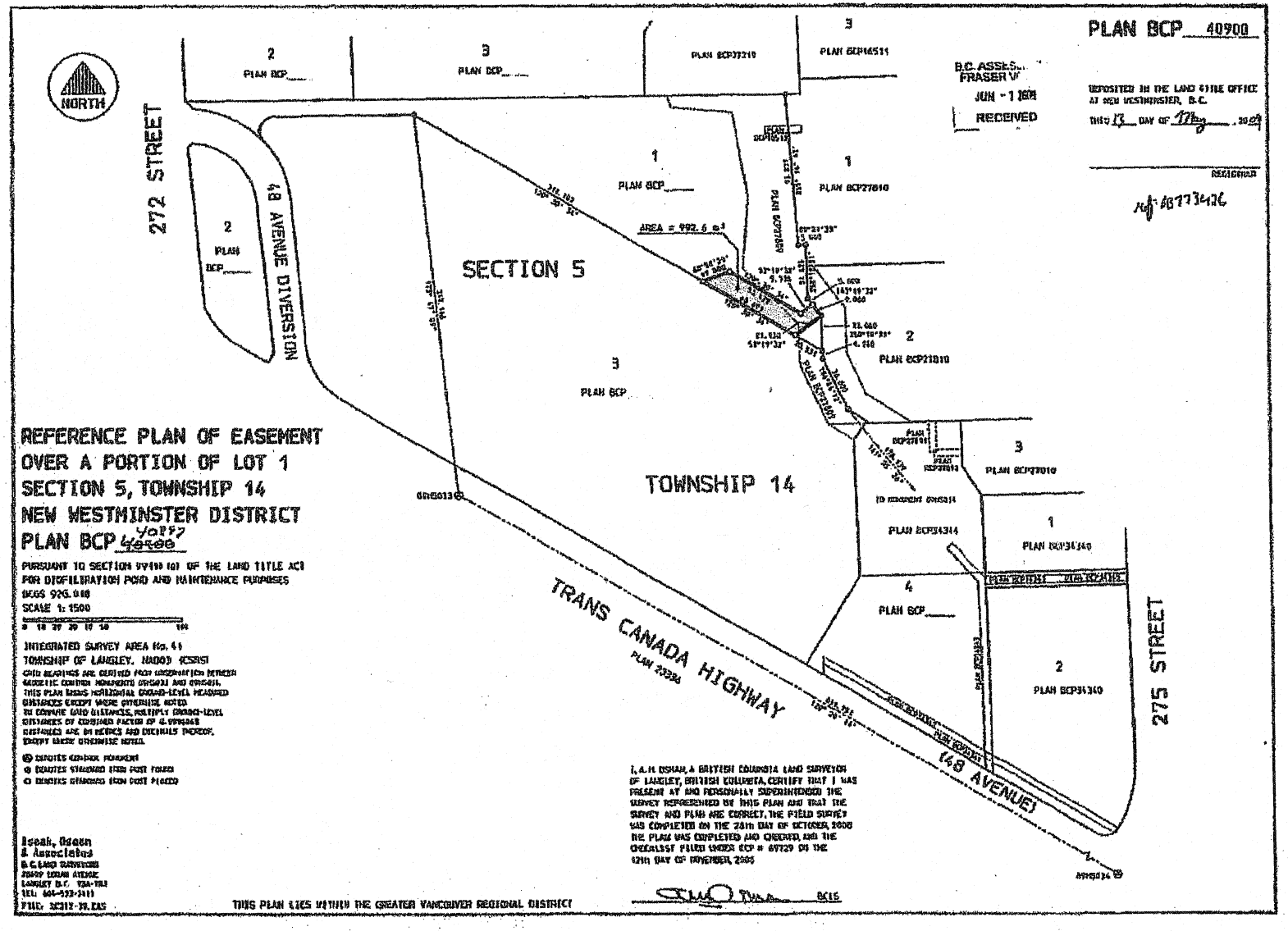

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From: Mercier, Liliane
Sent: August-11-16 9:09 AM
To: Rotinsky, Brenda
Subject: RE: URGENT INFORMAL - TIME SENSITIVE: Fisheries Issue

Thanks for the update Brenda and for cc'g me, much appreciated ☺

From: Rotinsky, Brenda
Sent: 11-Aug-16 9:05 AM
To: Johal, Sharan; Engelsjord, Michael
Cc: Fanos, Brad; Webb, Cheryl; Mercier, Liliane
Subject: Re: URGENT INFORMAL - TIME SENSITIVE: Fisheries Issue

Mike and I are working on this and will respond shortly.

From: Johal, Sharan
Sent: Thursday, August 11, 2016 08:17 AM
To: Engelsjord, Michael; Rotinsky, Brenda
Cc: Fanos, Brad; Webb, Cheryl; Mercier, Liliane
Subject: FW: URGENT INFORMAL - TIME SENSITIVE: Fisheries Issue

Hi Michael and Brenda,

Please provide a response by no later than 11:00 today if not sooner. I just got off the phone with Ottawa and it sounds as though the trucks have already started to move.

Ottawa is asking if we provided authorization as well as some background.

Please contact the MP and report back to me.

Thank you,
Catherine

Catherine Dickie
for
Sharan Johal
Team Leader | Chef d'équipe
Executive Secretariat | Secrétariat Exécutif
Regional Director General's Office | Bureau du Directrice Général Regional
Fisheries and Oceans Canada | Pêches et Océans Canada
Suite 200 - 401 Burrard Street | 401, rue Burrard, Pièce 200
Vancouver, BC V6C 3S4 | Vancouver, (C.-B.) V6C 3S4
Telephone/Téléphone: (604) 666-7102 | Fax/Télécopier: (604) 666-8956
Email/Courriel: Sharan.Johal@dfo-mpo.gc.ca

From: Waddell, Mark
Sent: August-11-16 8:11 AM
To: Johal, Sharan
Cc: Richter, Julie; Butcher, Ashley; Hopkins, Lillian; Martel, Robyne; Patrick, Lindsey
Subject: URGENT INFORMAL - TIME SENSITIVE: Fisheries Issue
Importance: High

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Good Morning,

Could the region please follow up with MP Aldag in regards to this matter ASAP and provide a report back to MINO – please include info on whether or not authorizations were issued for this as well.

Thanks,
M

From: Aldag, John - Personal [mailto:John.Aldag.P9@parl.gc.ca]
Sent: August 9, 2016 8:39 PM
To: Min@dfo-mpo.gc.ca
Subject: A Fisheries Issue

s.19(1)

Minister LeBlanc (Dominic): Welcome back to the West Coast. Sorry that I couldn't join you at the volunteer event last evening or any of your good-news announcements yesterday and today but constituency work dominates my calendar this week.

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Any assistance you can provide in getting me in touch with your department would be appreciated. My constituency office number is 604-575-6595 and my personal cell is [redacted] should anyone be available to call me in the next day or two.

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Thanks.

John Aldag
Cloverdale – Langley City

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From: Engelsjord, Michael
Sent: August-11-16 11:02 AM
To: Johal, Sharan
Cc: Fanos, Brad; Webb, Cheryl; Mercier, Liliane; Rotinsky, Brenda
Subject: RE: URGENT INFORMAL - TIME SENSITIVE: Fisheries Issue

Hi Catherine and Sharan,

Brenda and I spoke with MP Aldag.

DFO issued an authorization in 2000 for works at the location in question. The current work may be related to completion of this work. The Township of Langley may be referring something to DFO shortly and we will be looking at this when we receive it.

Mike

From: Johal, Sharan
Sent: 2016–August-11 8:17 AM
To: Engelsjord, Michael; Rotinsky, Brenda
Cc: Fanos, Brad; Webb, Cheryl; Mercier, Liliane
Subject: FW: URGENT INFORMAL - TIME SENSITIVE: Fisheries Issue
Importance: High

Hi Michael and Brenda,

Please provide a response by no later than 11:00 today if not sooner. I just got off the phone with Ottawa and it sounds as though the trucks have already started to move.

Ottawa is asking if we provided authorization as well as some background.

Please contact the MP and report back to me.

Thank you,
Catherine

Catherine Dickie
for
Sharan Johal
Team Leader | Chef d'équipe
Executive Secretariat | Secrétariat Exécutif
Regional Director General's Office | Bureau du Directrice Général Regional
Fisheries and Oceans Canada | Pêches et Océans Canada
Suite 200 - 401 Burrard Street | 401, rue Burrard, Pièce 200
Vancouver, BC V6C 3S4 | Vancouver, (C.-B.) V6C 3S4
Telephone/Téléphone: (604) 666-7102 | Fax/Télécopier: (604) 666-8956
Email/Courriel: Sharan.Johal@dfo-mpo.gc.ca

From: Waddell, Mark
Sent: August-11-16 8:11 AM
To: Johal, Sharan
Cc: Richter, Julie; Butcher, Ashley; Hopkins, Lillian; Martel, Robyne; Patrick, Lindsey

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Subject: URGENT INFORMAL - TIME SENSITIVE: Fisheries Issue
Importance: High

Good Morning,

Could the region please follow up with MP Aldag in regards to this matter ASAP and provide a report back to MINO – please include info on whether or not authorizations were issued for this as well.

Thanks,
M

From: Aldag, John - Personal [mailto:John.Aldag.P9@parl.gc.ca]
Sent: August 9, 2016 8:39 PM
To: Min@dfo-mpo.gc.ca
Subject: A Fisheries Issue

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Thanks.

s.19(1)

John Aldag
Cloverdale – Langley City

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From: Rotinsky, Brenda
Sent: August-11-16 11:12 AM
To: Johal, Sharan
Cc: Mercier, Liliane
Subject: RE: URGENT INFORMAL - TIME SENSITIVE: Fisheries Issue

We were on the phone with the MP off and on for quite some time...

Brenda

From: Johal, Sharan
Sent: 2016–August-11 11:01 AM
To: Rotinsky, Brenda; Engelsjord, Michael
Cc: Fanos, Brad; Webb, Cheryl; Mercier, Liliane
Subject: RE: URGENT INFORMAL - TIME SENSITIVE: Fisheries Issue

Hi Brenda and Michael,

A quick reminder that this is due at 11:00.

Please contact the MP directly and report back to me.

Thank you,
Catherine

Catherine Dickie
for
Sharan Johal
Team Leader | Chef d'équipe
Executive Secretariat | Secrétariat Exécutif
Regional Director General's Office | Bureau du Directrice Général Regional
Fisheries and Oceans Canada | Pêches et Océans Canada
Suite 200 - 401 Burrard Street | 401, rue Burrard, Pièce 200
Vancouver, BC V6C 3S4 | Vancouver, (C.-B.) V6C 3S4
Telephone/Téléphone: (604) 666-7102 | Fax/Télécopier: (604) 666-8956
Email/Courriel: Sharan.Johal@dfo-mpo.gc.ca

From: Rotinsky, Brenda
Sent: August-11-16 9:05 AM
To: Johal, Sharan; Engelsjord, Michael
Cc: Fanos, Brad; Webb, Cheryl; Mercier, Liliane
Subject: Re: URGENT INFORMAL - TIME SENSITIVE: Fisheries Issue

Mike and I are working on this and will respond shortly.

From: Johal, Sharan
Sent: Thursday, August 11, 2016 08:17 AM
To: Engelsjord, Michael; Rotinsky, Brenda
Cc: Fanos, Brad; Webb, Cheryl; Mercier, Liliane
Subject: FW: URGENT INFORMAL - TIME SENSITIVE: Fisheries Issue

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Hi Michael and Brenda,

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Telephone/Téléphone: (604) 666-7102 | Fax/Télécopier: (604) 666-8956
Email/Courriel: Sharan.Johal@dfo-mpo.gc.ca

From: Waddell, Mark
Sent: August-11-16 8:11 AM
To: Johal, Sharan
Cc: Richter, Julie; Butcher, Ashley; Hopkins, Lillian; Martel, Robyne; Patrick, Lindsey
Subject: URGENT INFORMAL - TIME SENSITIVE: Fisheries Issue
Importance: High

Good Morning,

Could the region please follow up with MP Aldag in regards to this matter ASAP and provide a report back to MINO – please include info on whether or not authorizations were issued for this as well.

Thanks,
M

From: Aldag, John - Personal [mailto:John.Aldag.P9@parl.gc.ca]
Sent: August 9, 2016 8:39 PM
To: Min@dfo-mpo.gc.ca
Subject: A Fisheries Issue

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John Aldag
Cloverdale – Langley City

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From: Engelsjord, Michael
Sent: August-11-16 12:56 PM
To: Rotinsky, Brenda
Subject: FW: URGENT INFORMAL - TIME SENSITIVE: Fisheries Issue

File numbers

13-HPAC-PA2-00529 Most recent referral requesting 'amendment' to previous authorization

99-HPAC-PA2-00217 Original Lower Fraser Office file through which authorization was issued.

From: Johal, Sharan
Sent: 2016–August-11 12:23 PM
To: Engelsjord, Michael; Rotinsky, Brenda
Subject: FW: URGENT INFORMAL - TIME SENSITIVE: Fisheries Issue

Hi Mike and Brenda,

Please see Mark's question below.

Thank you,
Catherine

Catherine Dickie
for
Sharan Johal
Team Leader | Chef d'équipe
Executive Secretariat | Secrétariat Exécutif
Regional Director General's Office | Bureau du Directrice Général Regional
Fisheries and Oceans Canada | Pêches et Océans Canada
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Telephone/Téléphone: (604) 666-7102 | Fax/Télécopier: (604) 666-8956
Email/Courriel: Sharan.Johal@dfo-mpo.gc.ca

From: Waddell, Mark
Sent: August-11-16 12:20 PM
To: Johal, Sharan
Cc: Richter, Julie; Butcher, Ashley; Hopkins, Lillian; Martel, Robyne; Patrick, Lindsey
Subject: RE: URGENT INFORMAL - TIME SENSITIVE: Fisheries Issue

Yes, can we please attempt to validate this (i.e., we don't seem to be sure that this work is related to that authorized in 2000)? Considerable concern on this one...

From: Johal, Sharan
Sent: August 11, 2016 3:16 PM
To: Waddell, Mark <Mark.Waddell@dfo-mpo.gc.ca>
Cc: Richter, Julie <Julie.Richter@dfo-mpo.gc.ca>; Butcher, Ashley <Ashley.Butcher@dfo-mpo.gc.ca>; Hopkins, Lillian <Lillian.Hopkins@dfo-mpo.gc.ca>; Martel, Robyne <Robyne.Martel@dfo-mpo.gc.ca>; Patrick, Lindsey <Lindsey.Patrick@dfo-mpo.gc.ca>
Subject: RE: URGENT INFORMAL - TIME SENSITIVE: Fisheries Issue

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Hi Mark,

Michael Engelsjord and Brenda Rotinsky provided the following.

"Brenda and I spoke with MP Aldag.

DFO issued an authorization in 2000 for works at the location in question. The current work may be related to completion of this work. The Township of Langley may be referring something to DFO shortly and we will be looking at this when we receive it."

Do you require any additional information?

Thanks,
Catherine

Catherine Dickie
for
Sharan Johal
Team Leader | Chef d'équipe
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Telephone/Téléphone: (604) 666-7102 | Fax/Télécopier: (604) 666-8956
Email/Courriel: Sharan.Johal@dfo-mpo.gc.ca

From: Waddell, Mark
Sent: August-11-16 8:11 AM
To: Johal, Sharan
Cc: Richter, Julie; Butcher, Ashley; Hopkins, Lillian; Martel, Robyne; Patrick, Lindsey
Subject: URGENT INFORMAL - TIME SENSITIVE: Fisheries Issue
Importance: High

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To: Min@dfo-mpo.gc.ca
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John Aldag
Cloverdale – Langley City

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From: Engelsjord, Michael
Sent: August-11-16 3:35 PM
To: pac.prmc / pac.urpcm (DFO/MPO)
Cc: Rotinsky, Brenda
Subject: RE: * URGENT * MP call - Langley 2016-001-02440
Attachments: RE: URGENT INFORMAL - TIME SENSITIVE: Fisheries Issue

We received this from the RDG's office this morning. Brenda Rotinsky and I called MP Aldag. See attached email chain.

From: pac.prmc / pac.urpcm (DFO/MPO)
Sent: 2016–August-11 3:22 PM
To: Engelsjord, Michael
Subject: * URGENT * MP call - Langley 2016-001-02440
Importance: High

Hi Michael,
The attached letter is re development in Langley.

We're being asked to handle it as an MP call – are you correct person who would handle this? If so, you can call the MP directly then fill out the outline form for MP calls and submit that to Sharan.

Can you let me know ASAP as the MP is expecting a call in the next day or so.

Thanks
Candace.

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From: Rotinsky, Brenda
Sent: August-11-16 1:28 PM
To: Billard, Karen
Subject: West Creek Project
Attachments: West Creek Background.pdf; Restrictive Covenant.pdf; TOL presentation.pdf; geo features map.pdf; Langley Field Naturalist Report.pdf; reference plan.pdf

Importance: High

Hi Karen,

Mike and I have been in contact with the MP below and the Ministers office about this but we need to sort out this file and determine exactly what is going on. Unfortunately it is complex and will require some time to sort out. The City of Langley has recently issued a permit 'subject to DFO approval' (?) for some works (on a detention pond or maybe to develop some land?) and they expect to send us a letter tomorrow or Monday to engage us. Using that information and the information below/attached, can you please assign someone to come up with a factual timeline of what is Authorized or not related to the proposed works? This needs to be complete by mid-late next week (or sooner if possible) as the Ministers office is keenly interested in the outcome. I'm not sure if a site visit will be warranted but we found out that the site has been gated and locked. There is also an occurrence related to this file that Don is working on that involves a pump and dead coho.

We have determined that the following 2 PATH files may be related:
F:\0 5572_Referrals\Archived\99-HPAC-PA2-00217\99-HPAC-PA2-00217
F:\0 5572_Referrals\Archived\13-HPAC-PA2-00529

Thank you,

Brenda Rotinsky

Acting Team Leader, Fisheries Protection Program
Fisheries and Oceans Canada/Government of Canada
Brenda.Rotinsky@dfo-mpo.gc.ca/Tel: 604-666-1349

Chargé d'équipe Intérimaire, La protection des pêches Progamme
Pêches et Océans Canada/Gouvernement du Canada
Brenda.Rotinsky@dfo-mpo.gc.ca/Tél: 604-666-1349

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Sent: August 9, 2016 8:39 PM
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Thanks.

John Aldag
Cloverdale – Langley City

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Pages 402 to / à 420

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From: Engelsjord, Michael
Sent: August-15-16 8:59 AM
To: 'John.Aldag@parl.gc.ca'
Cc: Rotinsky, Brenda
Subject: West Creek, Township of Langley site

Hello Mr. Aldag,

Thank you for bringing the West Creek, Township of Langley to our attention. My contact information is below if you want to forward me any further information from the Township.

Regards,

Michael Engelsjord, B.Sc., R.P.Bio.

Team Leader, Fisheries Protection Program / Ecosystem Management Branch
Fisheries and Oceans Canada / Government of Canada
Michael.Engelsjord@dfo-mpo.gc.ca / Tel. : 604-666-2365

Chef d'équipe, Programme de protection des pêches / Direction des écosystèmes
Pêches et Océans Canada / Gouvernement du Canada
Michael.Engelsjord@dfo-mpo.gc.ca / Tél. : 604-666-2365

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From: Billard, Karen
Sent: August-16-16 2:40 PM
To: Rotinsky, Brenda; Engelsjord, Michael
Subject: FW: Gloucester Industrial Estates Timeline
Attachments: Gloucester Industrial Estates Timeline.docx; Beedie Group EV Logistics DP.pdf; Beedie Group Truck Facility DP.pdf

The application is the third document.

From: Billard, Karen
Sent: 2016–August-15 10:42 AM
To: Rotinsky, Brenda
Cc: Siemens, Lisa; Weir, Lauren
Subject: FW: Gloucester Industrial Estates Timeline

Please find attached the information that Lisa and Lauren were able to collect for this area.

Please let me know if you would like anything additional or anything changes.

-Karen.

From: Weir, Lauren
Sent: 2016–August-12 2:59 PM
To: Billard, Karen
Cc: Siemens, Lisa
Subject: Gloucester Industrial Estates Timeline

Hey Karen,

Underneath is a table of the timeline we have been able to put together based on the information provided to us and the information available on PATH and the FPP Drive.

Gloucester Industrial Estates Timeline		
Date	Action	By Whom
2000-08-?? *	Authorization for the elimination and realignment of multiple ponds and watercourses (all tributaries to West and Nathan Creeks). Note: • authorization stated that works are not allowed within the restricted covenant area • relaxation of setback boundary in fisheries sensitive zone for the northern section of the development	Dale Paterson **
2001? *	Possible amendment to authorization that allowed	Dale Paterson **

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	BC Hydro to remove several trees, and for regular maintenance of a substation in the restricted covenant area. Re-planting and monitoring was required	
2004-07-30 *	Amendment to authorization, which allowed for an "interim detention" pond construction and the removal of the golf course requirements in design plans, as well as extending the authorization period to September 30, 2008	Dale Paterson **
2006-12-21	Restrictive Covenant Officiated	Corino Salomi
2013-10-08	Approval of larger detention pond plans and extension of authorization to include 2014 and 2015	Karen Billard

* Do not know the exact date as the signed copy cannot be found/has not yet been digitalized
** Based on unsigned copies

s.21(1)(b)

Summary points:

- Not much information has been digitalized yet unfortunately.
- Many of the files are drafts and not final copies so the exact dates are not always available.
- Can only find authorized works for the initial elimination and realignment of creeks/ponds and the creation of the detention pond, which changed designs, and the newest version was not undertaken.
- As far as can be understood from the FPP and PATH files, the covenant has remained intact with the exception of the BC Hydro substation which required some tree removals and vegetation maintenance.
- As for the two development permits mentioned in the West Creek Background pdf, we were unable to locate any information in PATH or on the FPP Drive about these projects. The City of Langley summaries of the two development permits are attached.

Please let us know if this review is adequate.

Cheers,

Lauren and Lisa

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Gloucester Industrial Estates Timeline		
Date	Action	By Whom
2000-08-?? *	Authorization for the elimination and realignment of multiple ponds and watercourses (all tributaries to West and Nathan Creeks). Note: • authorization stated that works are not allowed within the restricted covenant area • relaxation of setback boundary in fisheries sensitive zone for the northern section of the development	Dale Paterson **
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- As for the two development permits mentioned in the West Creek Background pdf, we were unable to locate any information in PATH or on the FPP Drive about these projects. The City of Langley summaries of the two development permits are attached.

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Township of Langley

Est. 1873

REPORT TO

MAYOR AND COUNCIL

PRESENTED: MAY 11 , 2009 REGULAR COUNCIL MEETING
FROM: COMMUNITY DEVELOPMENT DIVISION
SUBJECT: DEVELOPMENT PERMIT APPLICATION NO. 100556 (BEEDIE GROUP (EV LOGISTICS))

REPORT: 09-63
FILE: 14-05-0083

PROPOSAL:

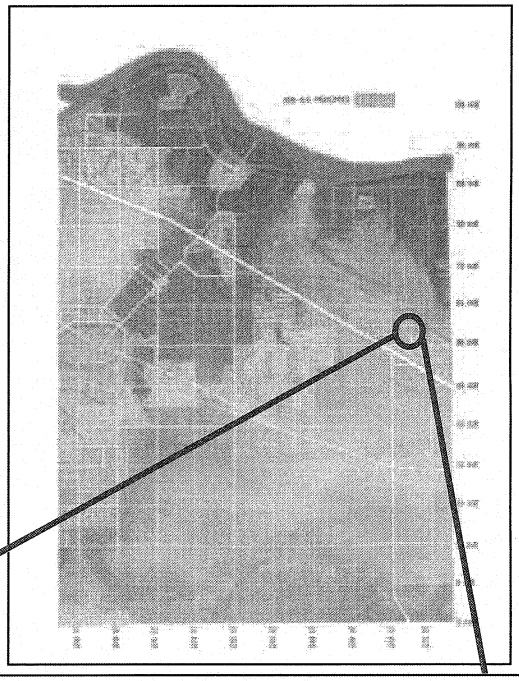
Development Permit for a 36,793 m^2 (396,000 ft^2) refrigerated warehouse and distribution centre (Beedie Group / EV Logistics) located at 5016 - 272 Street in Gloucester.

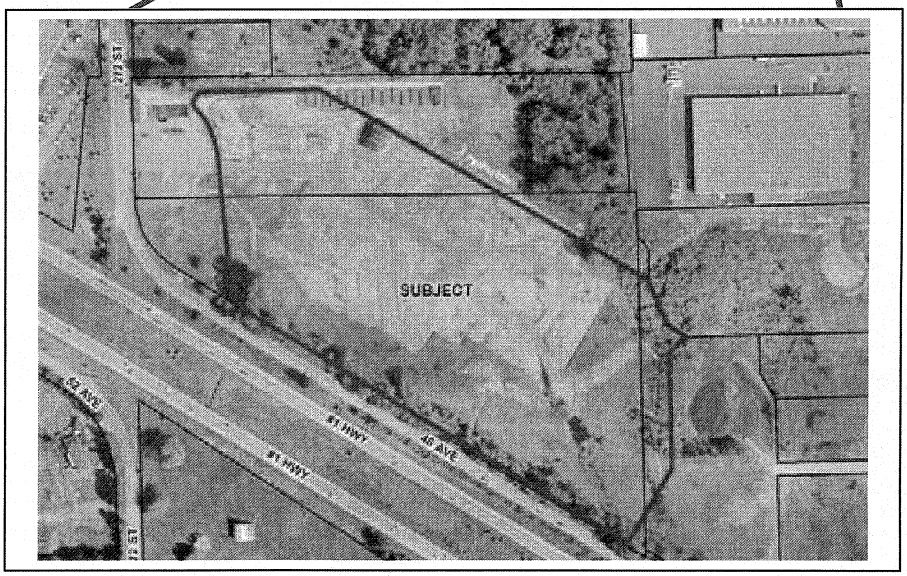
RECOMMENDATION SUMMARY:

That Council authorize issuance of Development Permit No. 100556, subject to eight (8) conditions.

RATIONALE:

The proposal complies with the Gloucester Community Plan (and its Development Permit guidelines), and with the site's General Industrial M-2A zoning.





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RECOMMENDATIONS:

That Council authorize issuance of Development Permit No. 100556 to 161884 Canada Inc. (Beedie Group) for property located in the 5016 - 272 Street, in accordance with Attachment B, subject to the following conditions:

a) That Subsection R13.3 (b), Schedule B, Langley Subdivision and Development Control Bylaw, 1994 No. 3335, is varied by deleting the words "with a maximum width of 11 m." from the first sentence of the third paragraph;
b) Building plans being in compliance with Schedules "A" through "K";
c) Landscape plans being in substantial compliance with Schedule "L" and "M" and in accordance with the Township's Street Tree and Boulevard Treatment Program to the acceptance of the Manager of Parks Design and Development;
d) Landscaping and boulevard treatment being secured by letter of credit at the building permit stage;
e) Provision of a final tree management plan incorporating tree retention, replacement and protection details in compliance with the Township's Tree Protection Bylaw, to the acceptance of the Manager of Parks Design and Development;
f) Rooftop mechanical equipment to be located so that it is not visible from adjacent roads, or alternatively screened from view by compatible architectural treatments;
g) All refuse areas to be screened in accordance with the Gloucester Building Design Guidelines; and
h) All chain link fences being black vinyl with black posts and rails.

Although not part of the Development Permit requirements, the applicant is advised that prior to issuance of a building permit the following items will need to be finalized:

i) Submission of an on-site servicing and site specific stormwater management plan in accordance with the Subdivision and Development Control Bylaw, and an erosion and sediment control plan in accordance with the Erosion and Sediment Control Bylaw, both to the acceptance of the General Manager of Engineering;
j) Provision of an Exterior Lighting Impact Plan prepared by an electrical engineer in compliance with the provisions of the Township's Exterior Lighting Impact Policy to the acceptance of the Manager of Permits and Licenses;
k) Confirmation of sewer and water capacities to the acceptance of the General Manager of Engineering; and
l) Payment of ISDC Review Fee and supplemental Development Permit fees.

EXECUTIVE SUMMARY:

Development Permit No. 100556 may be issued to 161884 Canada Inc. (Beedie Group) to permit construction of a 36,793 m^2 (396,000 ft^2) refrigerated warehouse and distribution centre located at 5016 - 272 Street in the Gloucester Industrial Area. The development complies with the Township's land use policies and, in staff's opinion, with the Development Permit guidelines of the Gloucester Community Plan (see Attachment A). Staff recommends issuance of the Development Permit, subject to eight (8) Development Permit Conditions and four (4) Building Permit conditions.

PURPOSE:

This report is to provide information and recommendations to Council concerning Development Permit No. 100556 for property located at 5016 - 272 Street in the Gloucester Industrial Estates.

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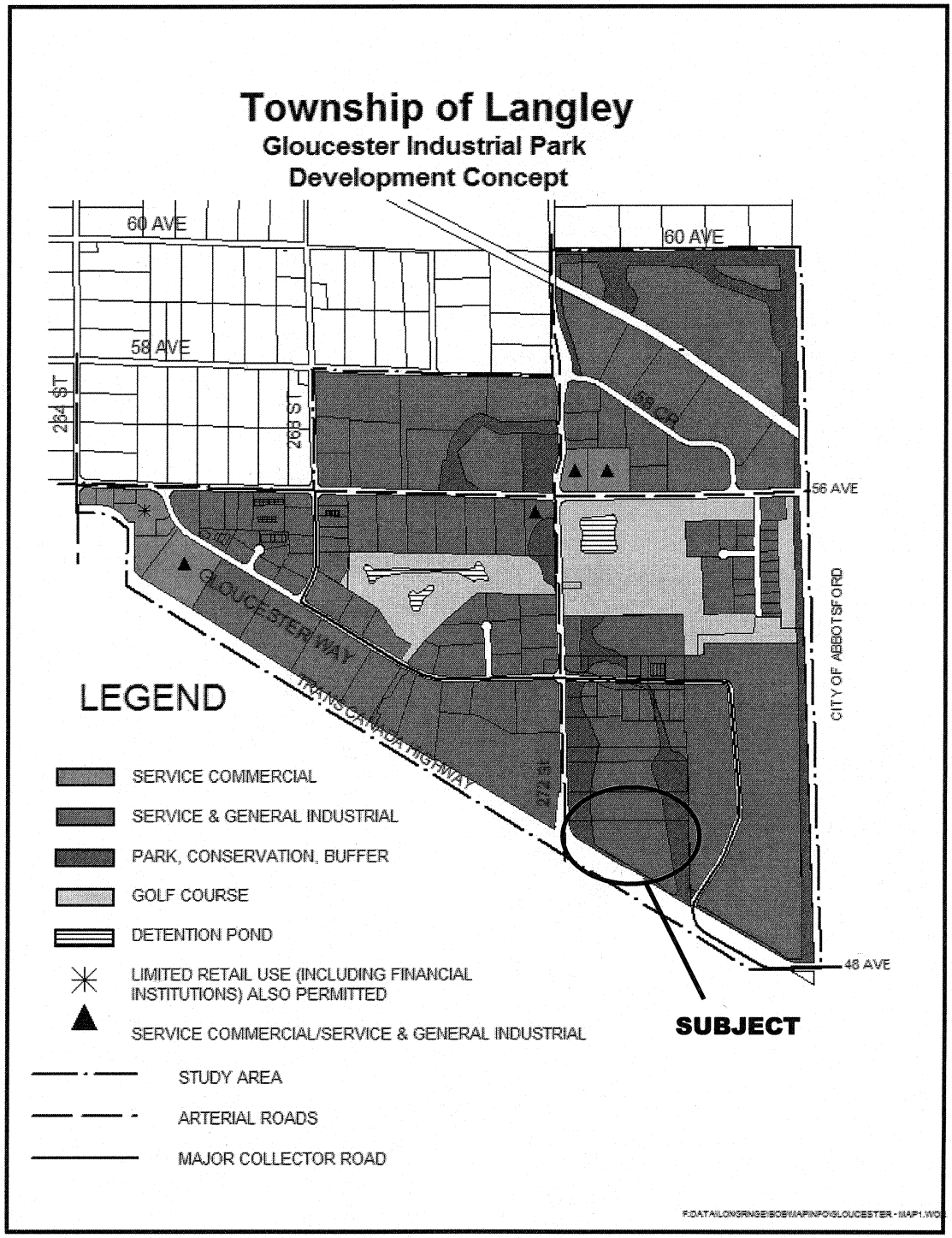
GLOUCESTER COMMUNITY PLAN



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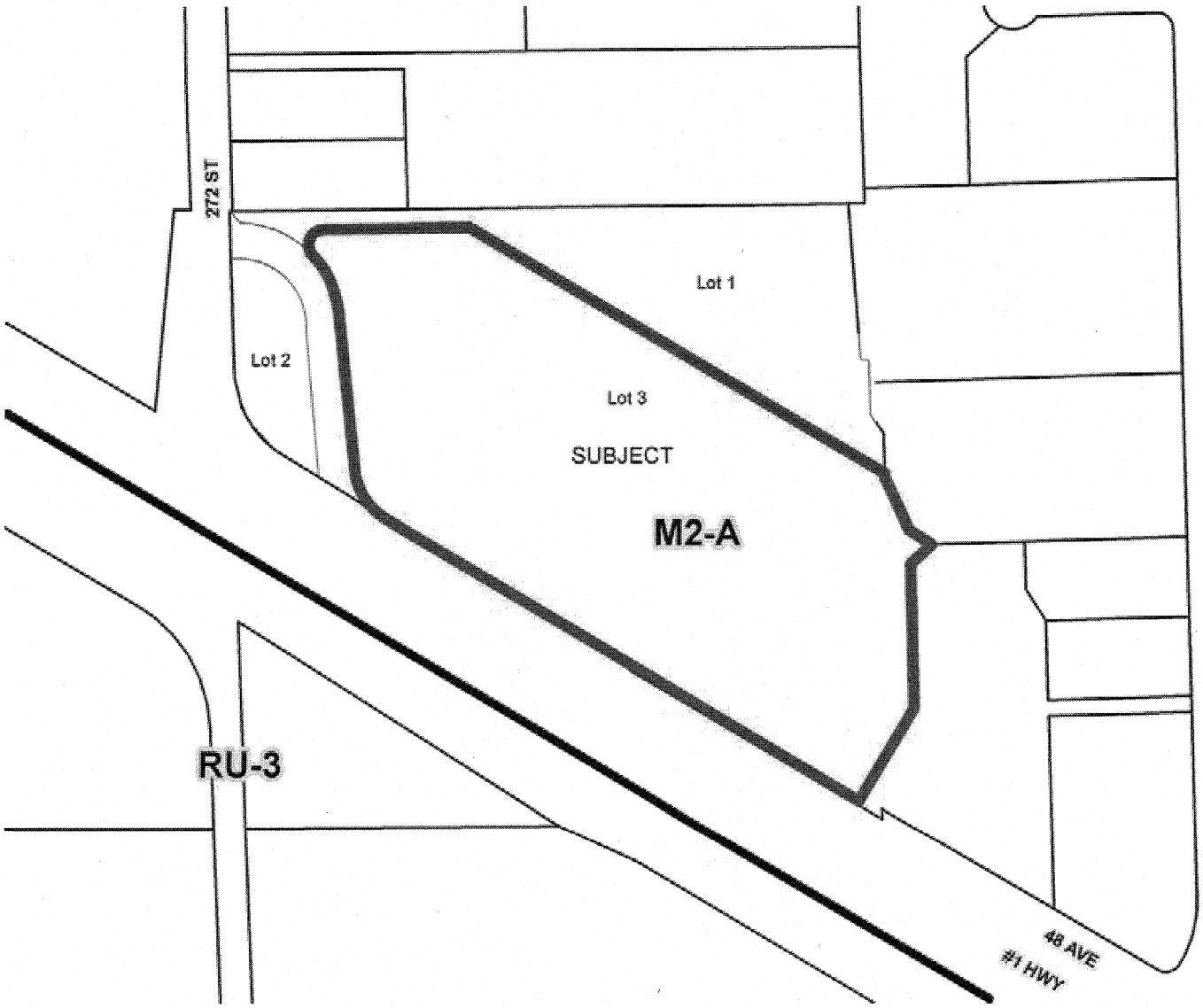
ZONING BYLAW NO. 2500



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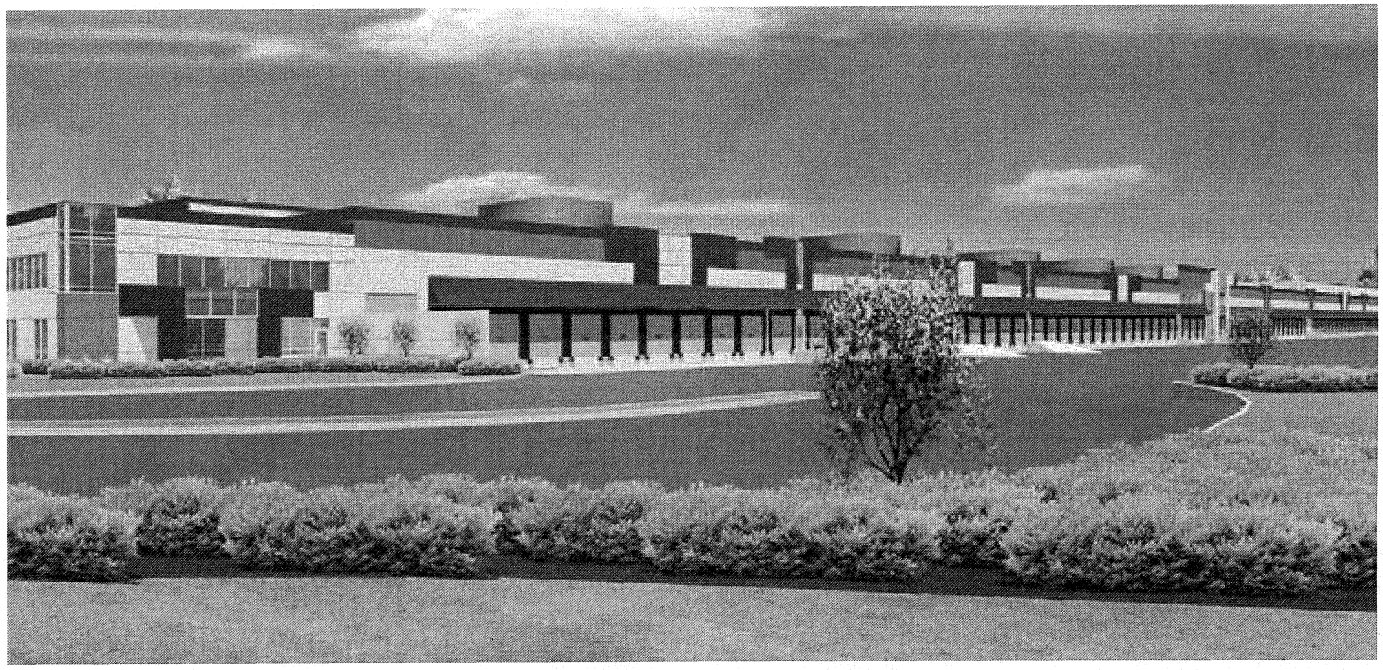
EXTERIOR RENDERINGS: SUBMITTED BY THE APPLICANT

Office



Loading Area

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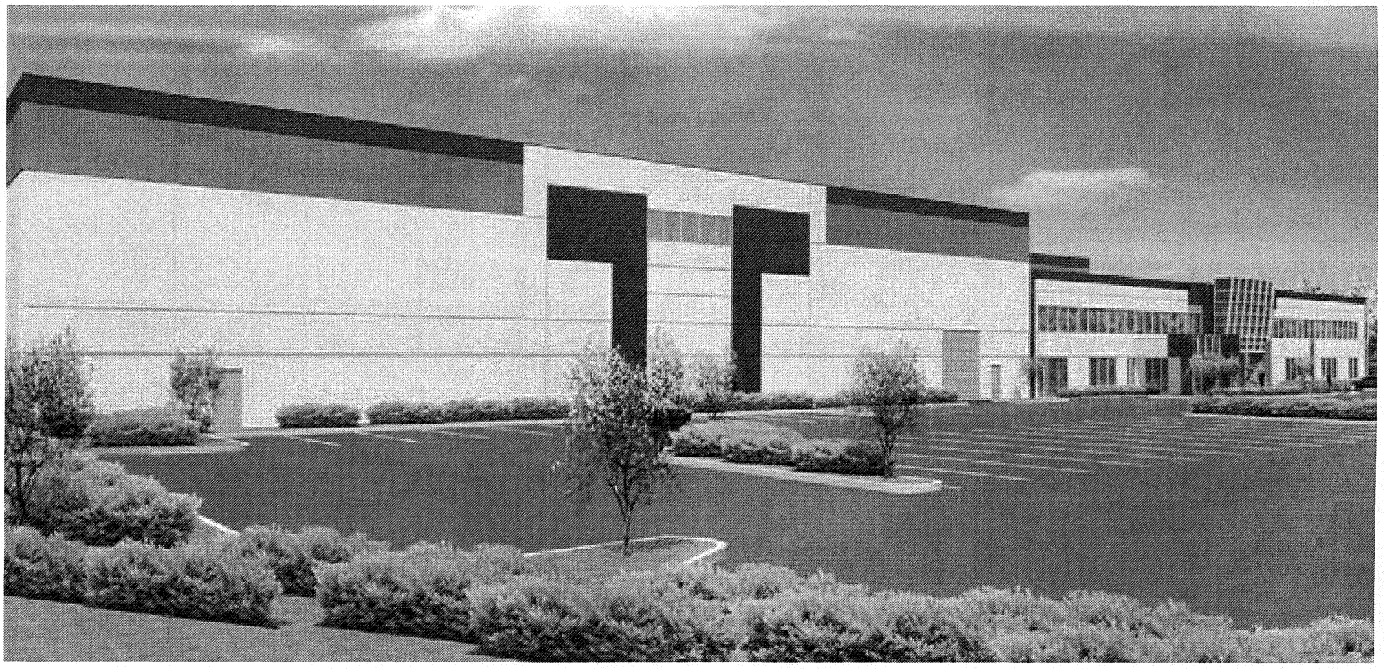
EXTERIOR RENDERINGS (Cont'd): SUBMITTED BY THE APPLICANT



West façade and Office

View westbound on Highway 1

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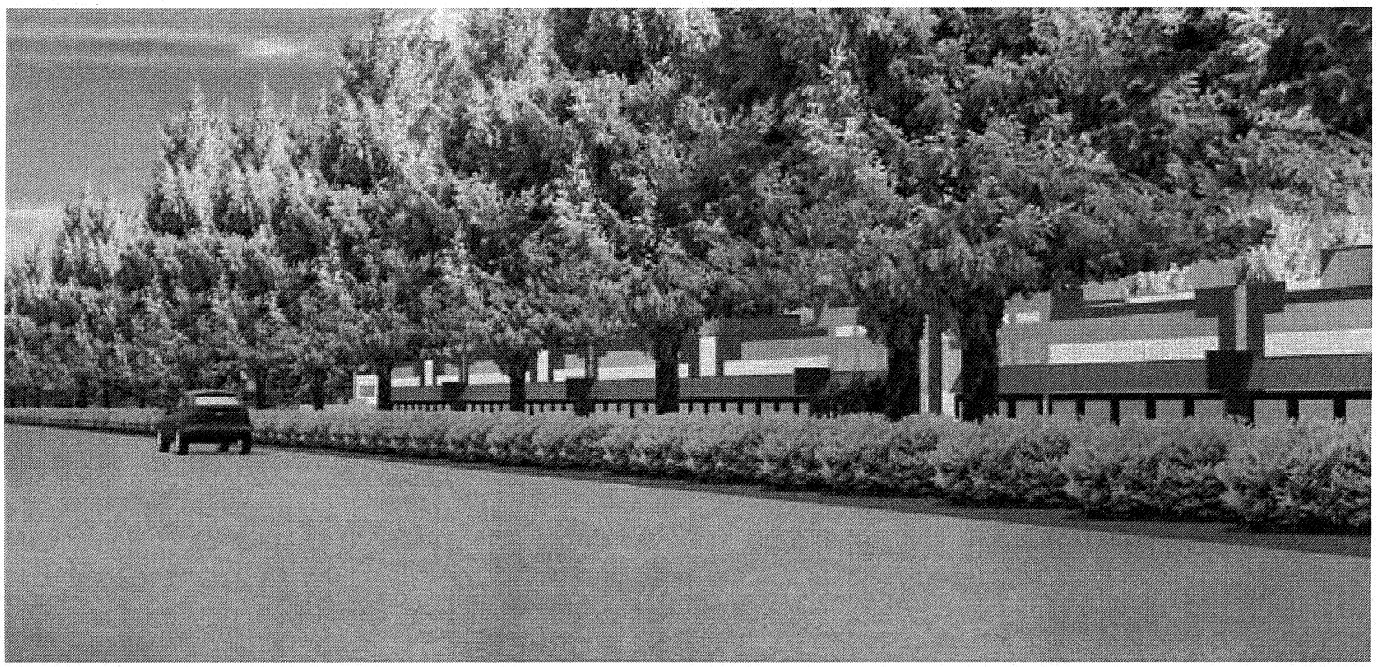
EXTERIOR RENDERINGS (Cont'd): SUBMITTED BY THE APPLICANT



View westbound on 48 Avenue

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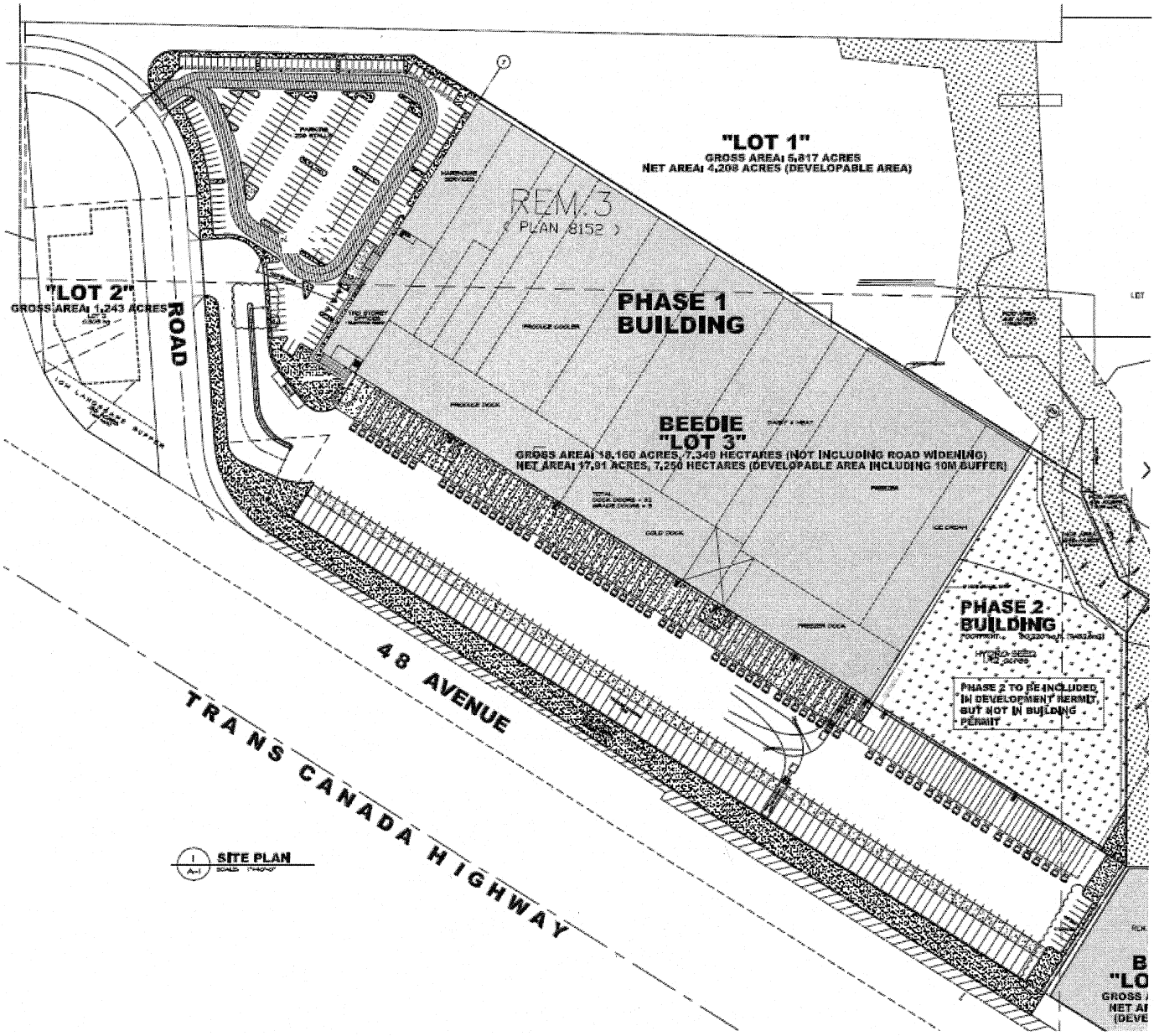
SITE PLAN SUBMITTED BY THE APPLICANT



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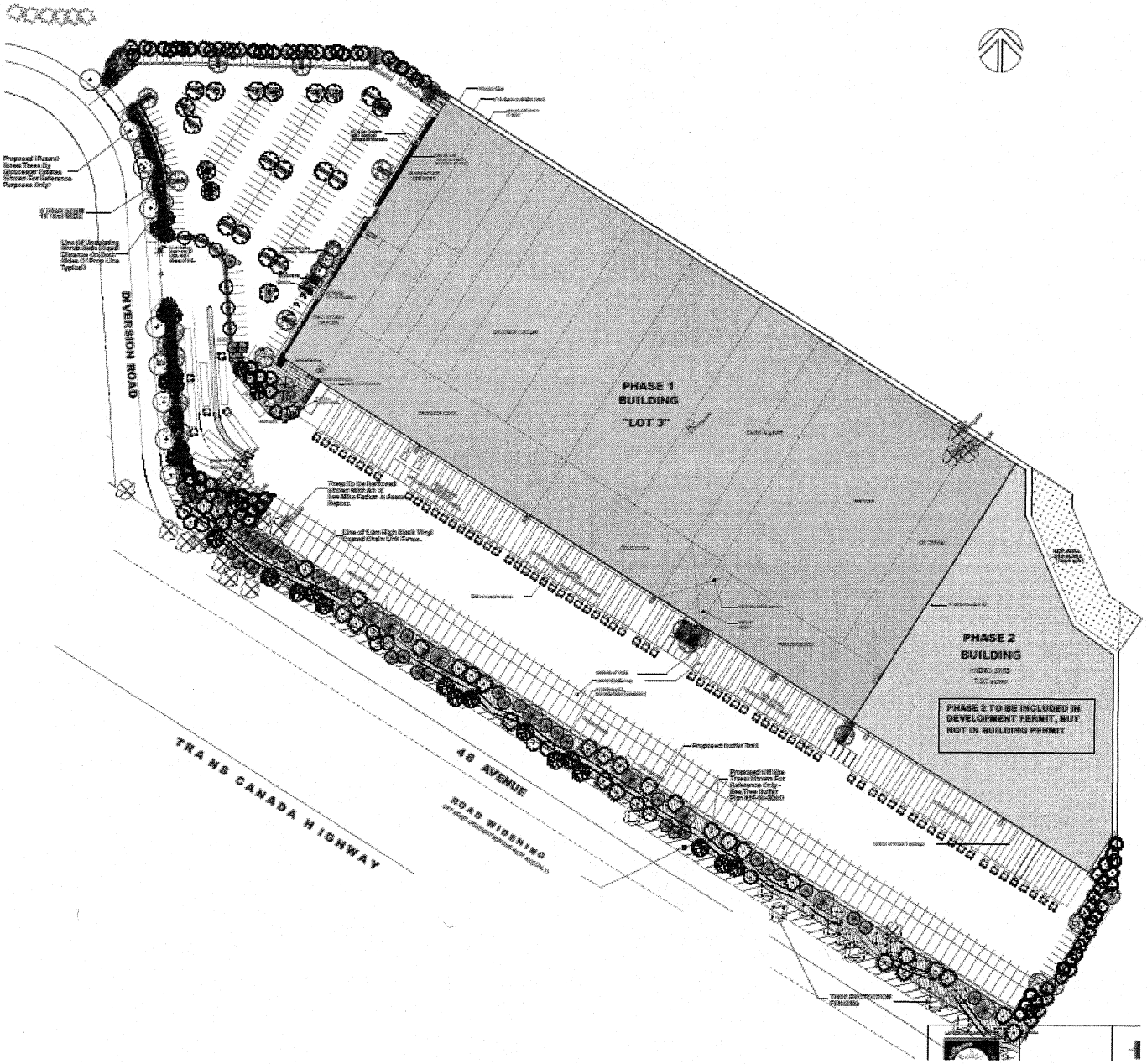
LANDSCAPE PLAN: SUBMITTED BY APPLICANT



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ADDITIONAL INFORMATION:

REFERENCE:

s.19(1)

Owner :	161884 Canada Inc. 3030 Gilmore Diversion Burnaby, BC V5G 3B4
Applicant / Agent:	The Beedie Group 3030 Gilmore Diversion Burnaby, BC V5G 3B4
Legal Description:	Lot 3, Section 5, Township 14, New Westminster District, Plan BCP_____
Location:	5016 - 272 Street
Area:	7.25 ha / 17.91 acres
Existing Zoning:	General Industrial Zone M-2A
Gloucester Community Plan:	Service & General Industrial
E.S.A. Designation:	E.S.A. # 32 – Upland between West Creek and Coglan Creek (Rating - #3)

BACKGROUND/HISTORY:

The subject site is designated for Service and General Industrial purposes in the Gloucester Community Plan. On April 20, 2009 Council re-zoned the property to General Industrial Zone M-2A. The Development Permit proposal is for a 36,793 m^2 (396,000 ft^2) refrigerated distribution centre for a major grocery logistics company (EV Logistics). The proposed building will consolidate the company's current refrigerated operation in Abbotsford and the operations of a third party freezer in Delta. Once the facility is operating at full capacity it will employ approximately 250 to 300 people.

DISCUSSION/ANALYSIS:

The development proposal is for a 36,793 m^2 (396,000 ft^2) refrigerated warehouse and distribution centre located at 5016 - 272 Street. In accordance with Council's policy, a rendering, site plan, building elevations, and landscape plan have been submitted detailing the proposed development's form, character and siting. Development Permit 100556 is attached as Attachment B.

Adjacent Uses:

Surrounding land uses include the following:

North:	Vacant Industrial Land (Zoned M-2A);
East:	environmental protection area and vacant industrial land (Zoned M-2A);
South:	48 Avenue and Highway 1 beyond; and
West:	272 Street, beyond which is industrial land zoned M-2A containing the existing EV Logistics distribution centre.

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Development Permit:

The building is sited on the northern portion of the subject property with 76 loading docks along its southern face. The southern portion of the site is comprised primarily of a paved yard to allow truck movements to and from the loading docks and 92 trailer storage stalls. The southern limit of the site is comprised of a 10 metre wide landscape buffer, which when mature, should completely screen the site from 48 Avenue. The site has also been designed to take advantage of existing grades which will result in the building and maneuvering yard sitting between 1.2 and 4.0 metres below the height of land at 48 Avenue. This grade differential serves to further obscure the active area of the site from view, particularly from vehicles traveling on Highway 1.

The building footprint covers 48.2% of the lot area, which is within the 60% lot coverage permitted in the M-2A zone. Given the size and scale of the project extra care has been taken to address the massing of the building. As the designer notes:

> ***Massing:***
> *The building is broken into two connected masses, the lower two storey offices and the larger, taller industrial building. The office component has been glazed on the two exposed sides providing visual connections to the street, parking areas and loading areas. A taller element has been incorporated in the office at the entrance on the west wall. This element is intended to add visual interest while remaining part of the fabric of the building and includes prominent glazing and stone features intending to be the focal point of the office. Reveals and glazing have been incorporated into the warehouse portion of the building, this along with foundation landscaping where possible to soften the aesthetic of the warehouse and connect it visually to the office component. The south facing warehouse loading wall has been broken up with colour bands, wing panels and glazing were suitable with the intent of adding visual interest and breaking up the massing of this long wall. The warehouse offices in the centre of the loading wall have been further enhanced by the inclusion of additional glazing and vertical elements to vary the roof line.*

The main field colour on the building will be a light gray (Benjamin Moore "zircon") with a darker gray (Benjamin Moore "Steely Gray") and dark blue (Benjamin Moore "Honorable Blue") accents.

The Gloucester Design Committee is in support of the Development Permit, which reflects its comments.

Access and Parking:

One 21.2 metre wide driveway provides access to the site for trucks and passenger vehicles from 272 Street. As this width is greater than the 11.0 metre maximum driveway width permitted in the Subdivision and Development Control Bylaw a variance is required. Staff support the variance (which has been incorporated into the Development Permit) as the additional width is required to facilitate the safe access and turning movements of the large number of heavy trucks that will attend the site. The applicant proposes to construct 255 parking spaces in accordance with the requirements of the Zoning Bylaw. As mentioned above, there are also 76 loading docks and 92 trailer storage spaces proposed on site.

Signage:

No signage has been included in the Development Permit application. A separate sign permit will be required should signage be required in the future. All signage will be required to comply with the Township's Sign Bylaw, Gloucester Building Scheme and the Development Permit Guidelines for the Gloucester Industrial Estates.

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Tree Protection:

Twelve (12) significant trees were identified on the subject site, all of which are proposed to be removed. According to the Township's Tree Protection Bylaw, the applicant is required to plant 545 replacement trees. Including normal landscape plantings, a total of 191 new trees will be planted on site and 354 trees will be planted offsite. Staff are exploring the opportunity to locate some of the offsite trees between Highway 1 and 48 Avenue to improve the buffer between Gloucester Industrial Estates and the traveling public. Any improvements to the highway corridor will require approval from the Ministry of Transportation. Final acceptance of a tree management plan (including tree replacement details) by the Manager of Parks Design and Development is required prior to issuance of a building permit.

Landscaping:

A 10 metre wide landscape buffer is located along the 48 Avenue frontage. Within the 10 metre landscape buffer a combination of trees and shrubs are proposed. The applicant is also providing a minimum 1.5 metre landscape buffer around the perimeter of the property. The landscape design affords maximum screening to the industrial portion of the site while maintaining visibility for the office portion.

Plantings are to include trees (Western Red Cedar, Western Hemlock, Vine Maple, Douglas Fir, Daybreak Flowering Cherry, Nootka Cypress, Dogwood, Himalayan Birch, Japanese Maple, Columnar Red Maple,) and shrubs (Viburnum, Western Red Cedar (hedge) ,Emerald Cedar, Spirea, Hardy French Rose, Red Flowering Current, Rhododendron, Zabel's Laurel, Otto Luken Laurel, Japanese Andromeda, Oregon Grape, Japanese Holly, Japanese Azalea). Final acceptance of the landscape plans by the Manager of Parks Design and Development is required prior to issuance of a building permit.

Servicing:

Full urban services (road, water, sanitary sewer and storm sewer) exist to the site. The east Langley area is experiencing water and sanitary sewer capacity problems. As such, a review of site discharge rates is required at the building permit stage. Upon review, temporary on-site storage and off-peak discharge of sewage may be required, subject to the acceptance of the General Manager of Engineering. The applicant will be required to confirm the adequacy of all services for the proposed use prior to issuance of a Building Permit.

At Building Permit, an onsite servicing and stormwater management plan (to address changes to onsite drainage) in accordance with the Subdivision and Development Control Bylaw must be provided to the acceptance of the General Manager of Engineering.

Environmental Considerations:

The Township's Environmentally Sensitive Areas (E.S.A.) study identifies the lands as forming part of the upland between West Creek and Coghlan Creek E.S.A. There is an existing DFO compensation area along the eastern edge of the site. Protection of this area was secured at time of rezoning and subdivision, in accordance with the overall Gloucester DFO Authorization. The current application does not encroach on this protected area.

An overall stormwater management plan was previously prepared for the Gloucester Industrial Estates. A site-specific stormwater management plan is required as part of the building permit application to deal with changes to on-site drainage resulting from the proposed building and paved areas. In addition, all works to be undertaken on site must comply with the erosion and sediment control plan provided at time of rezoning. These items, along with the provision of full urban services and compliance with the Township's Tree Protection Bylaw, satisfy the management guidelines identified in the Township's Environmentally Sensitive Areas Study.

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Exterior Lighting:

Council adopted an Exterior Lighting Impact Policy intended to address concerns regarding off-site lighting impacts from commercial and industrial development located adjacent to residential and rural properties or environmental areas. The Exterior Lighting Impact Policy was amended in 2008 to apply to developments adjacent to environmental areas as part of the Township's Wildlife Habitat Conservation Strategy. The subject site is adjacent to an environmental area, therefore, the Exterior Lighting impact policy applies. The lighting design will be reviewed at time of building permit.

Policy Considerations:

The proposed application complies with the "Service & General Industrial" designation of the Gloucester Community Plan, and complies with the applicable provisions of the General Industrial Zone M-2A zoning requirements. The proposal, in staff's opinion, also complies with the Development Permit Guidelines of the Gloucester Community Plan (see Attachment A).

Staff have notified adjacent property owners that this Development Permit application is being considered at its next meeting, and they may attend and speak to the matter should they deem it necessary. They have also been provided with a copy of this report.

Council's consideration of the Development Permit request is to be based on the form, character and siting of the proposal. Staff recommends that the Development Permit be issued as attached.

Respectfully submitted,

Mike Newall
DEVELOPMENT PLANNER
for
COMMUNITY DEVELOPMENT DIVISION

MNN

ATTACHMENT A Gloucester Community Plan Development Permit Guidelines
ATTACHMENT B Development Permit No.100556 text and Schedules "A" through "M"
SCHEDULE A – Rendering
SCHEDULE B – Rendering
SCHEDULE C – Rendering
SCHEDULE D – Rendering
SCHEDULE E – Rendering
SCHEDULE F – Site Plan
SCHEDULE G – Partial Floor Plan
SCHEDULE H – Partial Floor Plan
SCHEDULE I – Elevations
SCHEDULE J – Detail Elevations
SCHEDULE K – Office Floor Plan
SCHEDULE L – Landscape Plan
SCHEDULE M – Landscape Plan – Plant List

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ATTACHMENT A

GLOUCESTER COMMUNITY PLAN

Development Permit Guidelines

In a Development Permit Area, before a building permit may be obtained, Council must first issue a Development Permit. Council may set forth conditions under which development may take place that may be in addition to normal zoning requirements and the developer's Statutory Building Scheme registered as a charge against the lands pursuant to Section 216(1) of the Land Title Act.

Form and Character

- Building design, materials and exterior finish and landscaping shall support the creation of an attractive, high quality estate industrial environment and shall conform to the provisions of Gloucester's Statutory Building Scheme;
- Low profile building designs are encouraged, particularly adjacent to residential and rural areas as well as the No. 1 Highway;
- Commercial buildings are encouraged to incorporate "pitched" roofs or other similar roof treatment into the building design;
- The use of smooth surfaced, light coloured building materials, finished, painted "tilt-up" concrete panels, acrylic stucco, brick, baked enamel finished metal siding, or metal panels is encouraged;
- The use of untreated or unfinished concrete, metal or aluminum as a final building finish will not be permitted;
- Building design, layout, siting, landscaping, screening and buffering shall reflect the need to reduce noise impacts from the No. 1 Highway and between industrial development and adjacent uses;
- Buildings on corner sites or on lots backing onto roads shall be designed to recognize the building's visibility from more than one street with continuity of design, materials, exterior finish, signage and landscaping;
- Roof top mechanical equipment shall be hidden behind screens designed as an integral part of a building, or parapets may be extended to conceal such equipment;
- Underground utilities shall be provided;
- Building plans submitted in support of a Development Permit shall:
    - Be of sufficient detail to convey the intent of the design in terms of the building's appearance, exterior finish, materials and colour treatments;

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- Be prepared by an architect registered in B.C.;
- Include a coloured rendering or perspective drawing and typical building elevations;
- Include a coloured site plan indicating the siting of all buildings and structures, property lines, dimensions, easements, rights of way, roads, areas, phasing and significant physical features;
- Include a detailed statement of land and building uses, lot sizes, coverage, building height, staging and the location and dimensions of landscape and buffer areas.

Landscape Areas and Buffers

Landscape plans submitted in support of a Development Permit shall:

- Be of sufficient detail to convey the intent of the landscape design;
- Complement the objective of creating an attractive, high quality industrial environment;
- Comply with the Landscape Design Guidelines attached as Appendix "A" to the developer's Statutory Building Scheme;
- Be prepared by a landscape architect registered in B.C.;
- Include a detailed plant list, quantity and sizing of plant material;
- Include fencing design, material and specifications;
- Include a cost estimate of the value of the landscape works including fencing and installation (of both the landscape works and fencing);
- Include boulevard treatment and street tree plantings in accordance with the Township's Boulevard Treatment and Street Tree Policy;
- At the building permit stage, be secured by a letter of credit;
- In buffer and building setback areas on-site natural vegetation shall be encouraged to be retained wherever practical;
- No site development works involving the removal of natural vegetation in the buffer or setback areas shall take place until after the Development Permit has been issued;
- Natural vegetation or berming adjacent to the No. 1 Highway shall not be removed unless specifically authorized by the Development Permit;

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- Adjacent to the No. 1 Highway, where no natural vegetation exists or where natural vegetation is specifically authorized to be removed by the Development Permit, it shall be replaced by a combination of landscape works and berming;

- Berms, where required, shall be a minimum of 1.8m height and be landscaped with evergreen shrubs/hedges and other plantings forming a continuous opaque screen;

- Adjacent to the street (other than the No. 1 Highway) a minimum 5m wide landscape area is required;

- Adjacent to residential or rural areas, a minimum 10m wide landscape area/buffer is required, plus a 1.8m high (minimum) fence designed to reduce the visual and noise impacts of the industrial use on adjacent lands;

- Parking areas are to be landscaped and shall not occupy more than 25% of the front yard of a building;

- Outside storage areas are to be screened; and

- Refuse collection areas shall be enclosed within a building or screened by a combination of walls, fencing and landscaping.

Signs

Sign plans submitted in support of the Development Permit application shall:

- Be in accordance with the developer's Statutory Building Scheme and the Township's Sign Control Bylaw;

- Be prepared by a professional graphic designer showing the location, type, size, colour and height of all signs, logos, graphics, symbols and colours to be located on all buildings and on free-standing signs;

- Complement the building's design scheme;

- Involve only one free-standing sign containing only the corporate names and street numbers on its face;

- No illuminated sign creating a glare or reflection on any building or street shall be permitted;

- Signs shall only identify those businesses located within the building itself.

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ATTACHMENT B

THE CORPORATION OF THE TOWNSHIP OF LANGLEY

Development Variance Permit No. 100556

This Permit is issued this _____ day of _____, 2009 to:

1. NAME: 161884 Canada Inc.

   ADDRESS: 3030 Gilmore Diversion
   Burnaby, BC V5G 3B4

2. This permit applies to and only to those lands within the Municipality described as follows and to any and all buildings, structures and other development thereon:

   LEGAL DESCRIPTION: Lot 3, Section 5, Township 14, New Westminster District, Plan BCP_____

   (hereinafter called the "said lands")

   CIVIC ADDRESS: 5016 - 272 Street

3. This Permit is issued subject to compliance with all of the Bylaws of the Municipality of Langley applicable thereto, except as specifically varied or supplemented by this permit as follows:

   a. That Subsection R13.3 (b), Schedule B, Langley Subdivision and Development Control Bylaw, 1994 No. 3335, is varied by deleting the words "with a maximum width of 11 m." from the first sentence of the third paragraph;
   b. Building plans being in compliance with Schedules "A" through "K";
   c. Landscape plans being in substantial compliance with Schedule "L" and "M" and in accordance with the Township's Street Tree and Boulevard Treatment Program to the acceptance of the Manager of Parks Design and Development;
   d. Landscaping and boulevard treatment being secured by letter of credit at the building permit stage;
   e. Provision of a final tree management plan incorporating tree retention, replacement and protection details in compliance with the Township's Tree Protection Bylaw, to the acceptance of the Manager of Parks Design and Development;
   f. Rooftop mechanical equipment to be located so that it is not visible from adjacent roads, or alternatively screened from view by compatible architectural treatments;
   g. All refuse areas to be screened in accordance with the Gloucester Building Design Guidelines; and
   h. All chain link fences being black vinyl with black posts and rails.

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4. Although not part of the Development Permit requirements, the applicant is advised that prior to issuance of a building permit the following items will need to be finalized:

   i. Submission of an on-site servicing and site specific stormwater management plan in accordance with the Subdivision and Development Control Bylaw, and an erosion and sediment control plan in accordance with the Erosion and Sediment Control Bylaw, both to the acceptance of the General Manager of Engineering;
   j. Provision of an Exterior Lighting Impact Plan prepared by an electrical engineer in compliance with the provisions of the Township's Exterior Lighting Impact Policy to the acceptance of the Manager of Permits and Licenses;
   k. Confirmation of sewer and water capacities to the acceptance of the General Manager of Engineering; and
   l. Payment of ISDC Review Fee and supplemental Development Permit fees.

5. The land described herein shall be developed strictly in accordance with the terms, conditions and provisions of this Permit and any plans and specifications attached as a Schedule to this Permit which shall form a part hereof.

   This Permit is not a Building Permit. All developments forming part of this Development Permit shall be substantially commenced within two years after the date the Development Permit is issued. This permit shall have the force and effect of a restrictive covenant running with the land and shall come into force on the date of an authorizing resolution passed by Council.

   It is understood and agreed that the Municipality has made no representations, covenants, warranties, guarantees, promises or agreement (verbal or otherwise) with the developer other than those in this Permit.

   This Permit shall enure to the benefit of and be binding upon the parties hereto and their respective heirs, executors, administrators, successors and assigns.

   AUTHORIZING RESOLUTION PASSED BY COUNCIL THIS ____ DAY OF _____, 2009.

SCHEDULE A – Rendering
SCHEDULE B – Rendering
SCHEDULE C – Rendering
SCHEDULE D – Rendering
SCHEDULE E – Rendering
SCHEDULE F – Site Plan
SCHEDULE G – Partial Floor Plan
SCHEDULE H – Partial Floor Plan
SCHEDULE I – Elevations
SCHEDULE J – Detail Elevations
SCHEDULE K – Office Floor Plan
SCHEDULE L – Landscape Plan
SCHEDULE M – Landscape Plan – Plant List

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Proposed Distribution Warehouse for:

EV LOGISTICS 2 WAREHOUSE

272nd ST. & 48th AVENUE DIVERSION, LANGLEY B.C.

THE BEEDIE GROUP

Township of Langley

Est. 1873

SCHEDULE A
RENDERING

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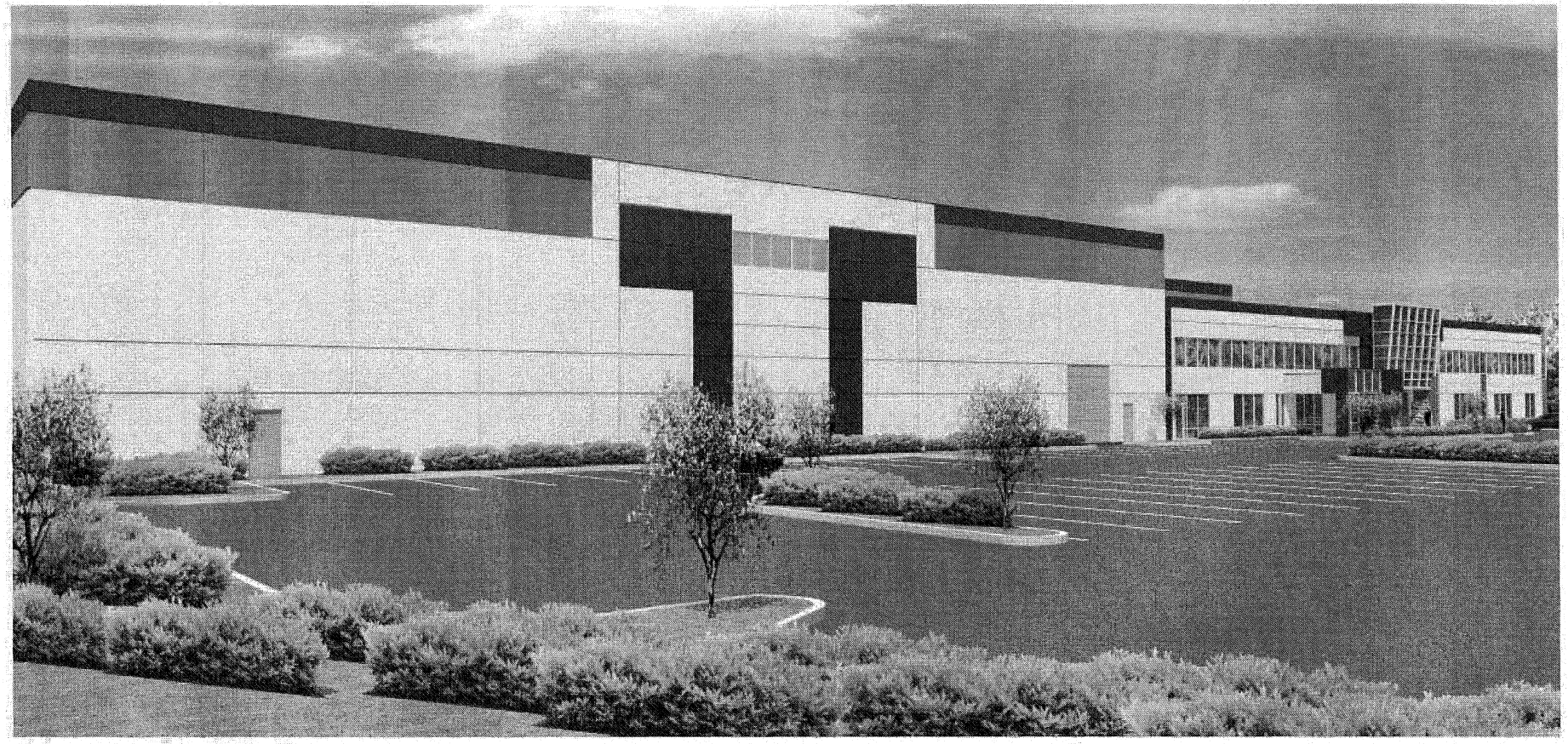

Proposed Distribution Warehouse for:

EV LOGISTICS 2 WAREHOUSE

272nd ST. & 48th AVENUE DIVERSION, LANGLEY B.C.

THE BEEDIE GROUP

Township of Langley

Est. 1873

SCHEDULE B
RENDERING

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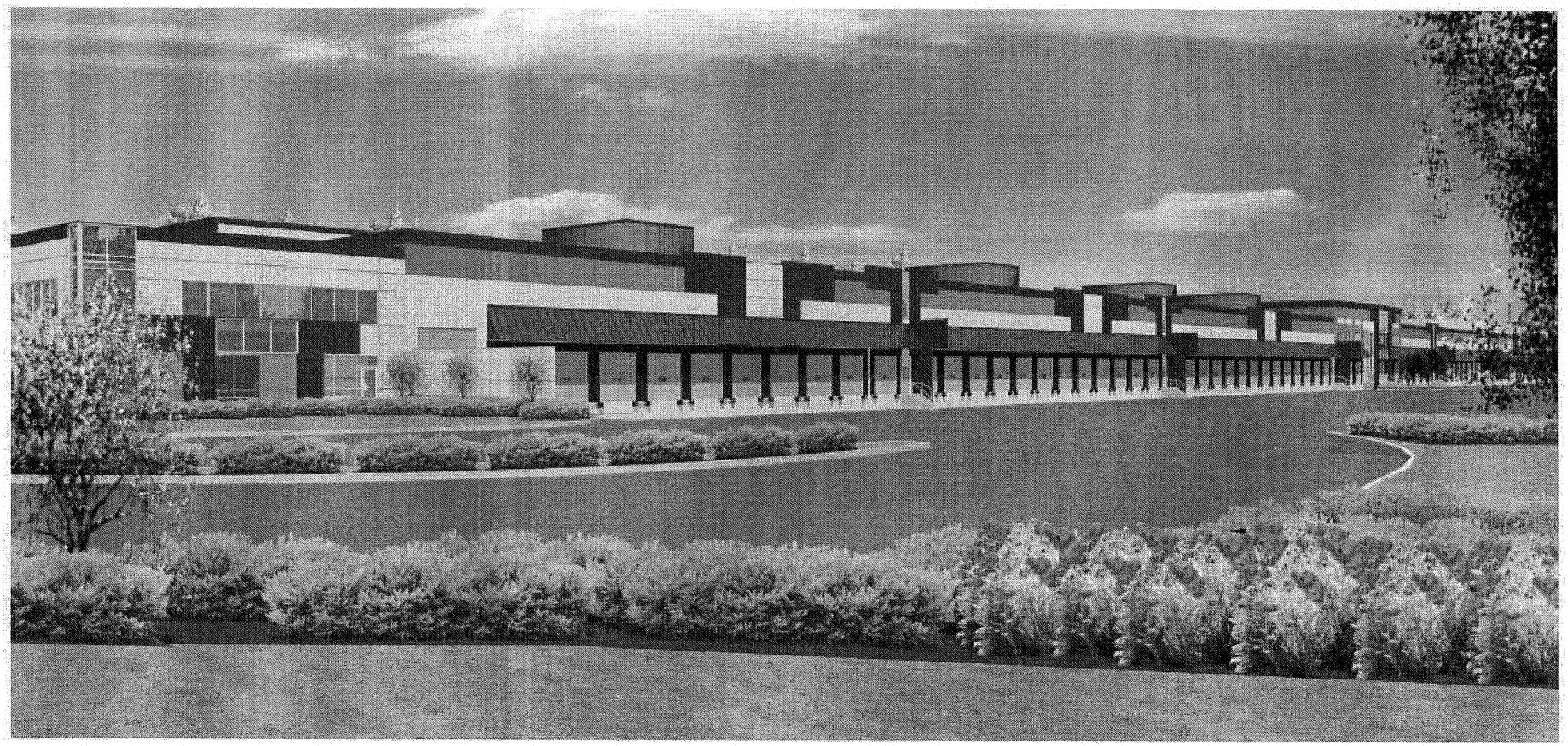

Proposed Distribution Warehouse for:

EV LOGISTICS 2 WAREHOUSE

272nd ST. & 48th AVENUE DIVERSION, LANGLEY B.C.

THE BEEDIE GROUP

Township of Langley

Est. 1873

SCHEDULE C
RENDERING

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Proposed Distribution Warehouse for:

EV LOGISTICS 2 WAREHOUSE

272nd ST. & 48th AVENUE DIVERSION, LANGLEY B.C.

THE BEEDIE GROUP

Township of Langley

Est. 1873

SCHEDULE D
RENDERING

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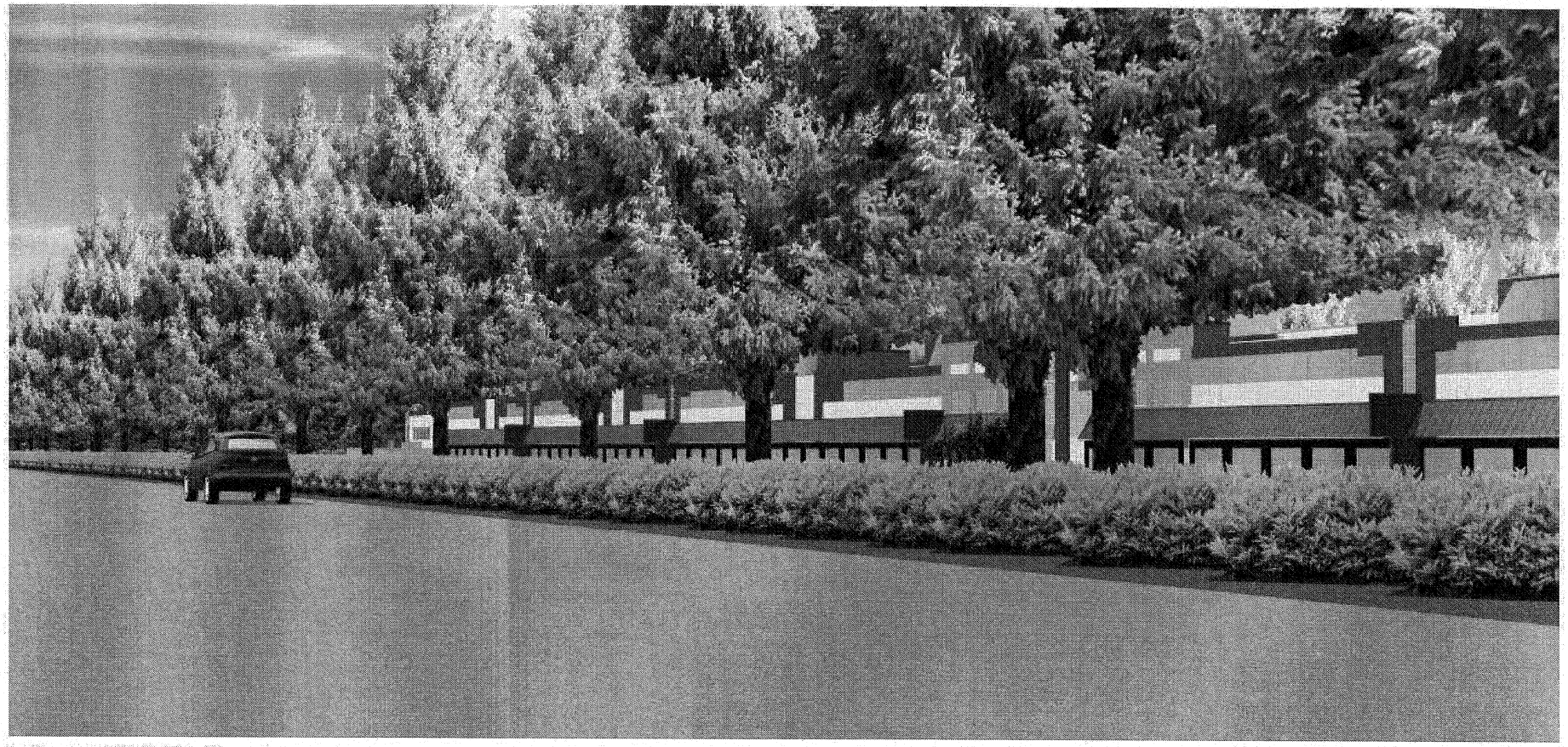

Proposed Distribution Warehouse for:

EV LOGISTICS 2 WAREHOUSE

272nd ST. & 48th AVENUE DIVERSION, LANGLEY B.C.

THE BEEDIE GROUP

Township of Langley

Est. 1873

SCHEDULE E
RENDERING

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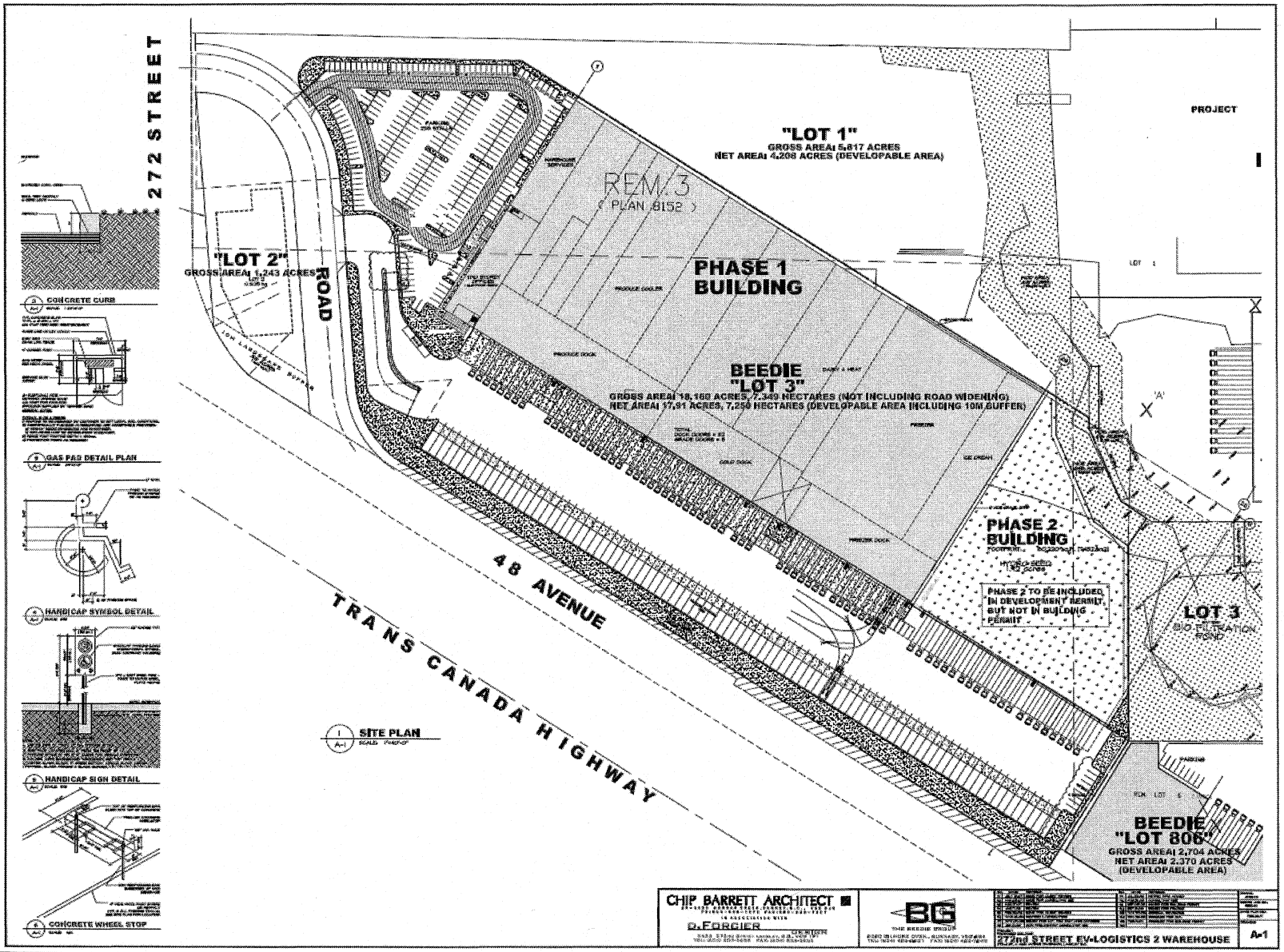

Township of Langley
Est. 1873

SCHEDULE F
SITE PLAN

N

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s.20(1)(b)

Township of Langley
Est. 1873

SCHEDULE G
PARTIAL FLOOR PLAN

N

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s.20(1)(b)

Township of Langley
Est. 1873

SCHEDULE H
PARTIAL FLOOR PLAN

N

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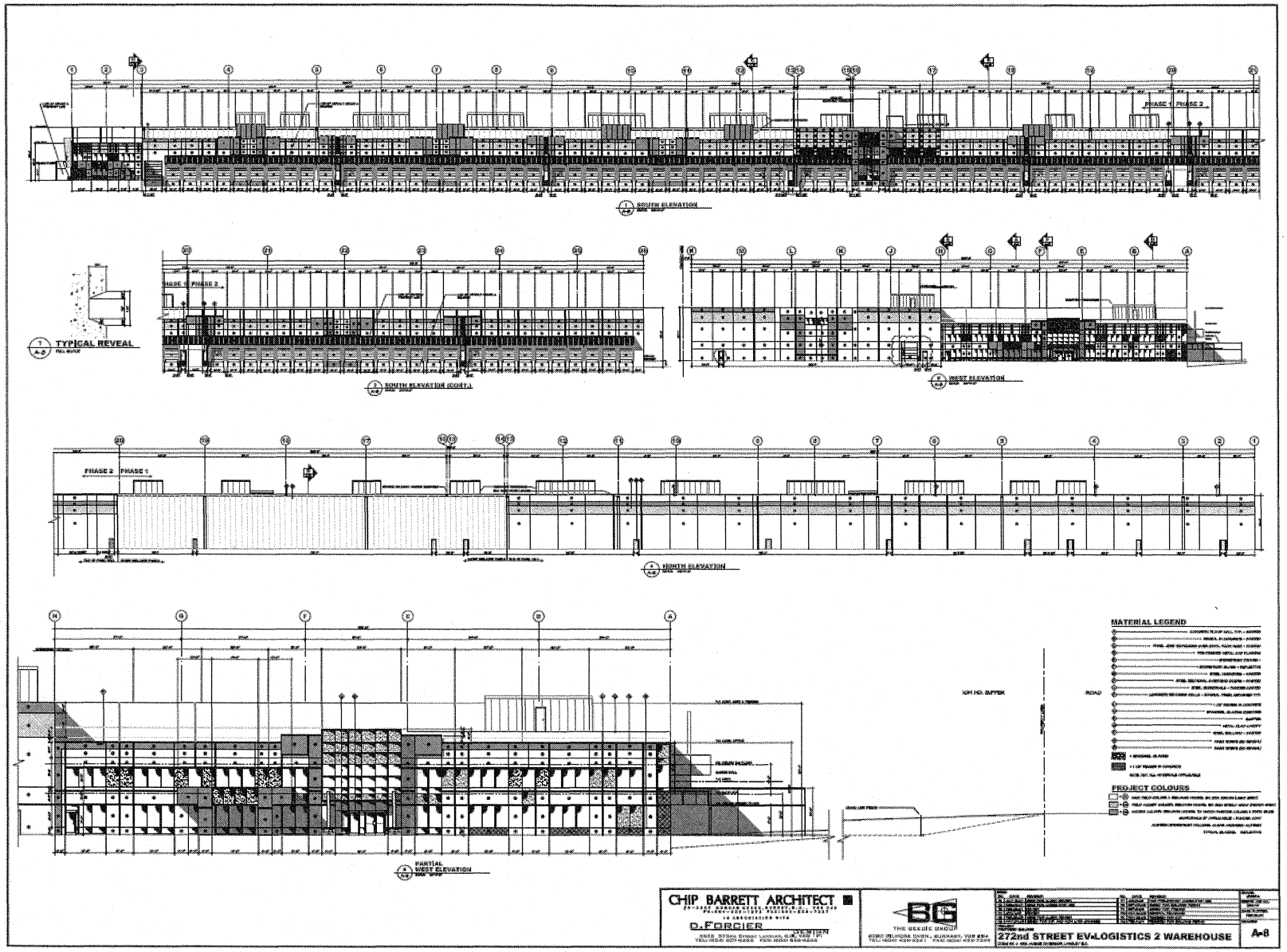

Township of Langley

Est. 1873

SCHEDULE I
ELEVATIONS

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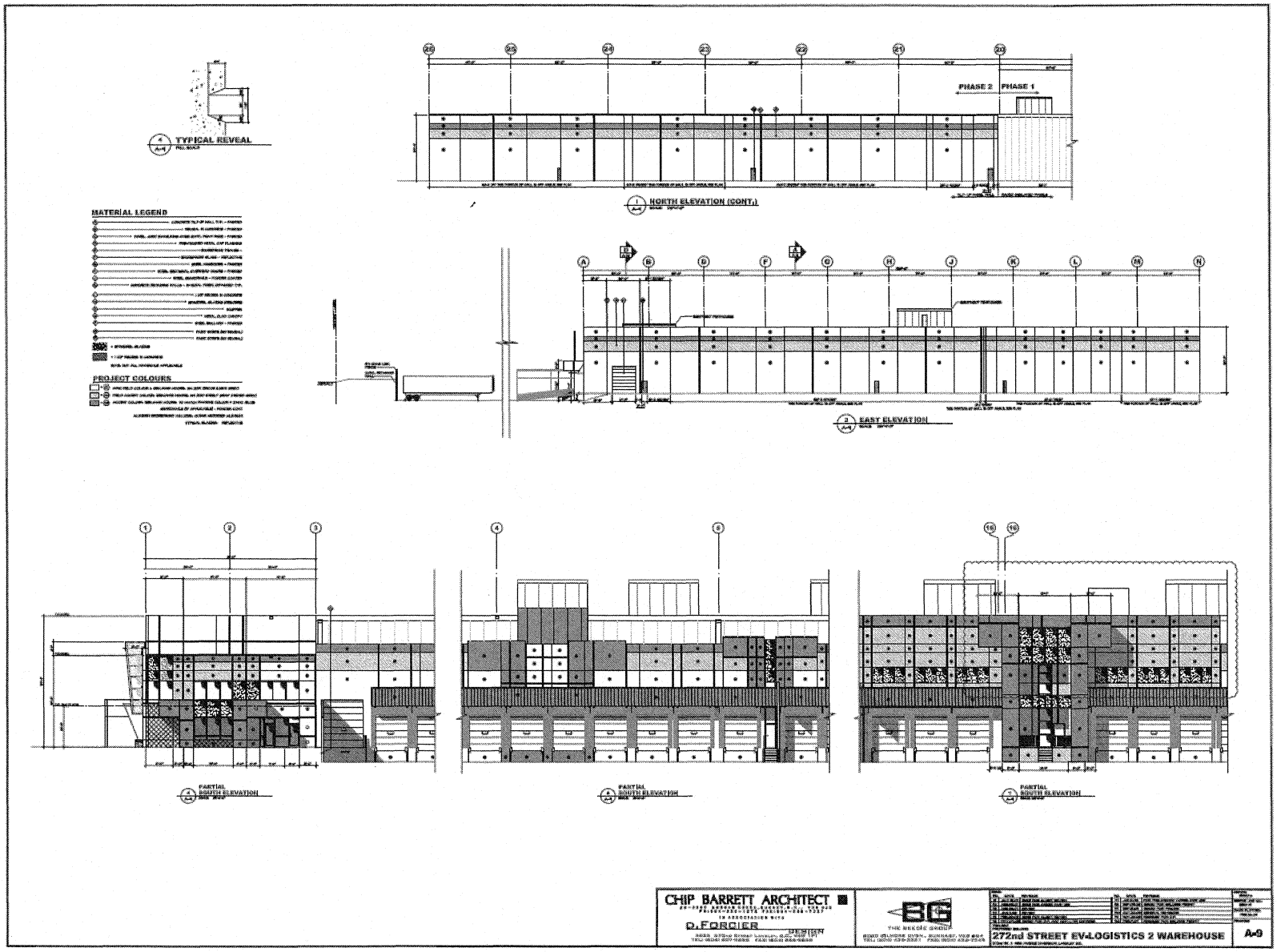

Township of Langley

Est. 1873

SCHEDULE J
DETAIL ELEVATIONS

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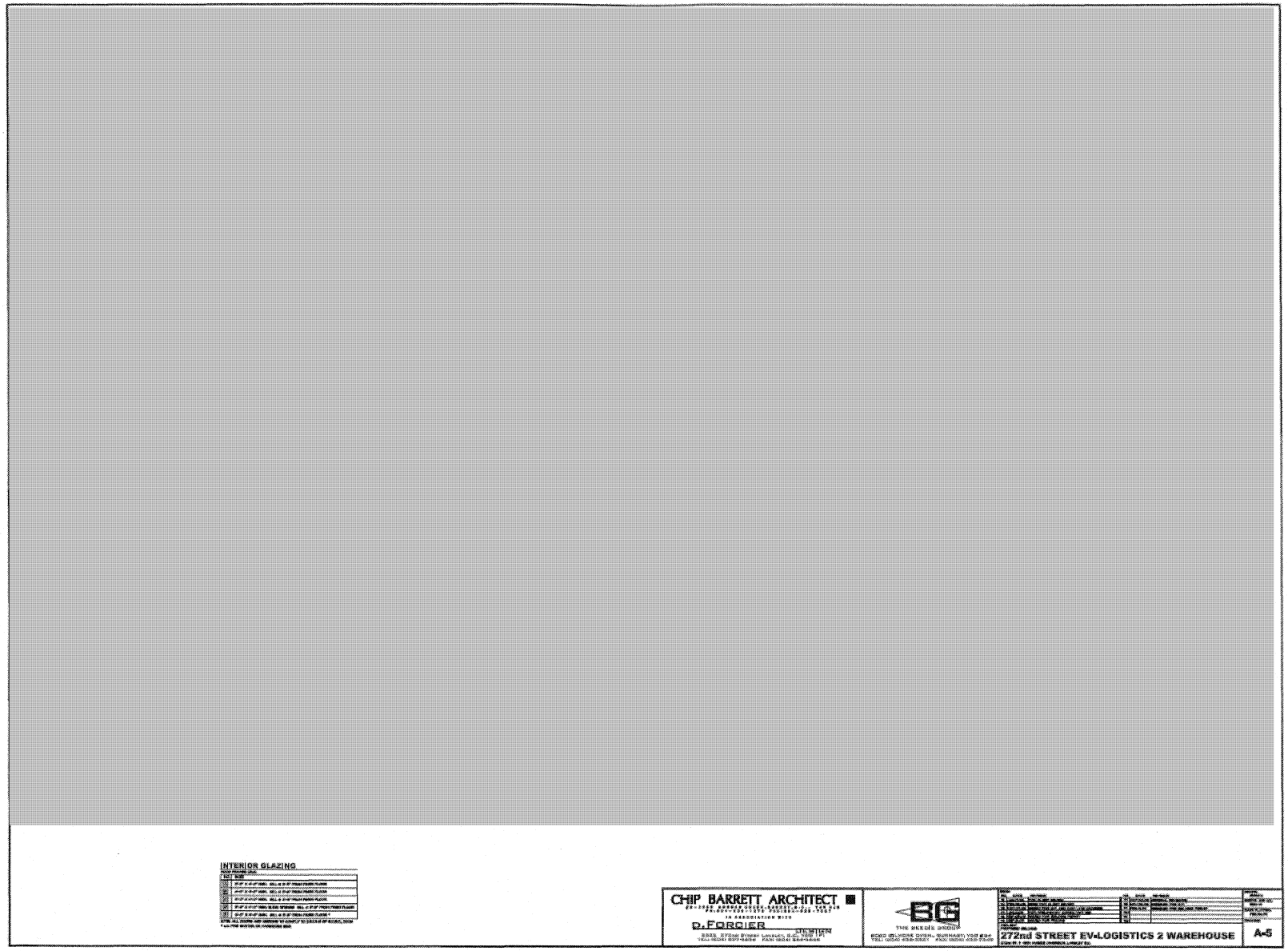
s.20(1)(b)



INTERIOR GLAZING

CHIP BARRETT ARCHITECT

D. FORCIER

THE BEEDIE GROUP

272nd STREET EV-LOGISTICS 2 WAREHOUSE

A-5

Township of Langley

Est. 1873

SCHEDULE K
OFFICE FLOOR PLAN

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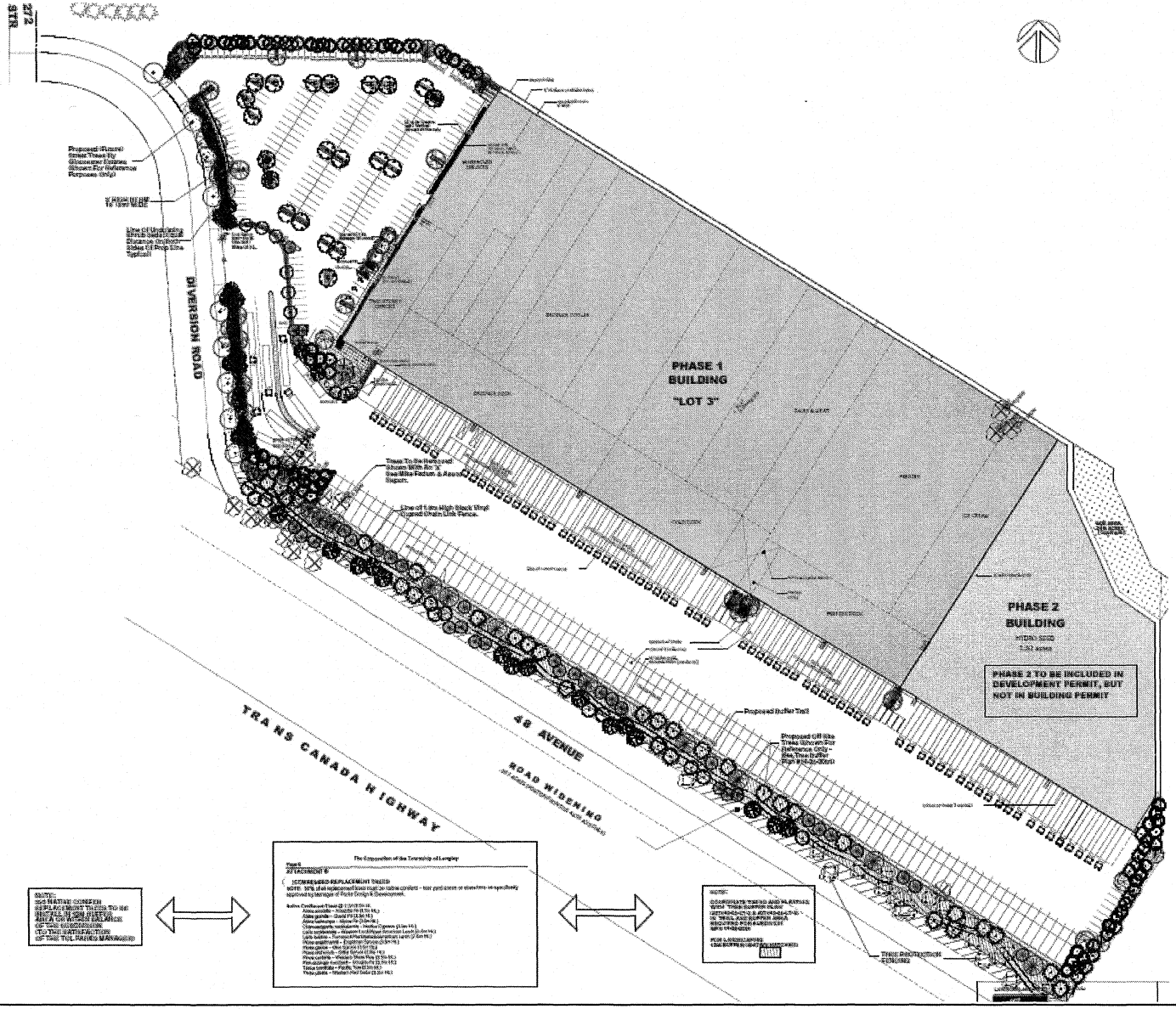

Township of Langley

Est. 1873

SCHEDULE L
LANDSCAPE PLAN

N

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PLANT LIST

SYMBOL	QTY.	BOTANICAL NAME	COMMON NAME	SIZE
		Trees		
	3	Acer circinatum	Vine Maple	2.5m Ht.
	2	Acer palmatum 'Osakazuki'	Japanese Maple Var.	2.5m Ht. / 5-stem
	6	Acer rubrum 'Bowhall'	Columnar Red Maple Var.	5cm cal.
	21	Acer rubrum 'Morgan'	Red Maple Var.	5cm cal.
	29	Betula jacquemontii	Himalayan Birch	5cm cal.
	15	Cornus 'Eddie's White Wonder'	Dogwood	5cm cal.
	7	Chamaecyparis nootkatensis	Nootka Cypress	2.5m Ht. / Spreading Form
	3	Prunus yedoensis 'Akebono'	Daybreak Flowering Cherry	5cm cal.
	19	Pseudotsuga menziesii	Douglas Fir	2.5m Ht. / natural form / multiStd
	50	Thuja plicata	Western Red Cedar	2.5m Ht. / tree form
	36	Tsuga heterophylla	Western Hemlock	2.5m Ht.
		Shrubs		
	166	Azalea japonica 'Coral Bells'	Japanese Azalea	2 gal. pot
	17	Cornus alba elegantissima	Variegated Dogwood	2 gal. pot
	631	Ilex crenata (low)*	Japanese Holly	2 gal. pot
	39	Mahonia aquifolium	Oregon Grape	2 gal. pot
	6	Pieris japonica 'Forest Flame'	Japanese Andromeda	2 gal. pot
	233	Prunus l. 'Otto Luiken'	Otto Luiken Laurel	2 gal. pot
	185	Prunus l. zabeliana	Zabel's Laurel	2 gal. pot
	119	Rhododendron 'Unique'	Rhododendron var.	5 gal. pot
	4	Rhododendron 'Anna Rose Whitney'	Rhododendron var.	5 gal. pot
	10	Ribes sanguineum	Red Flowering Currant	5 gal. pot
	71	Rosa meidiland 'Royal Bonica'	Hardy French Rose var.	2 gal. pot
	111	Spiraea x bumalda 'Gold Flame'	Spirea var.	2 gal pot
	5	Thuja occidentalis 'Emerald'	Emerald Cedar	4' Ht.
	35	Thuja plicata 'Excelsa'	Western Red Cedar (hedge)	5' Ht.
	265	Viburnum davidii	Viburnum	2 gal pot
		Ground Covers/Perennials		
	128	Erica x carnea 'Vivienne Pearl'	Winter Heather	4" pot, 18" o.c.
	770	Arctostaphylos uva-ursi	Vancouver Jade	4" pot, 18" o.c.
	2724	Gaultheria shallon	Solal	4" pot, 24" o.c.
	10	Hemerocallis 'Stella d'oro'	Daylily var.	1 gal. pot
	4	Polystichum munitum	Western Sword Fern	1 gal. pot

Landscape Notes:

1. Specification as per most recent BC "Landscape Standards" and Landpave Design Inc. "Spec Notes"
2. * - Denotes varieties to be selected by Landscape Architect at nursery.
3. Automatic Irrigation System for Landscape Area (Gloucester Design Guidelines)
4. 3" (75mm) Depth Bark Mulch in All Planting Beds/Not in Planting Beds within 6m wide Covenant Area.

Township of Langley

Est. 1873

SCHEDULE M
LANDSCAPE PLAN – PLANT LIST

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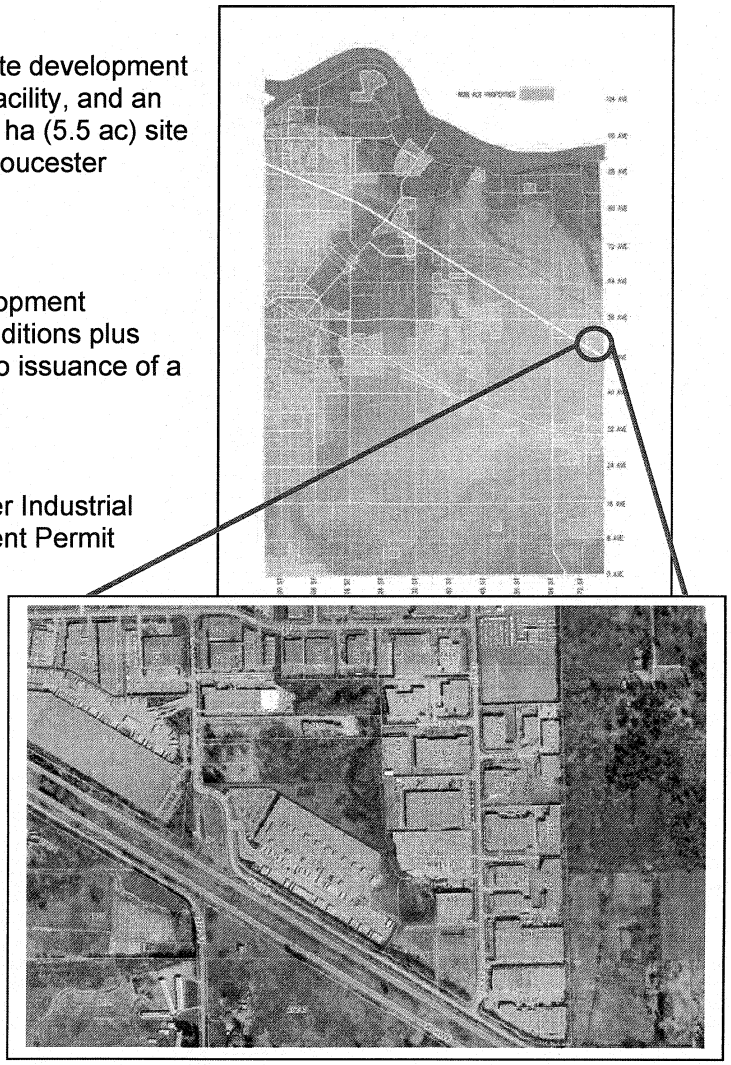
Township of Langley
Est. 1873

REPORT TO MAYOR AND COUNCIL

PRESENTED:	JUNE 27, 2016 – PUBLIC HEARING	**REPORT:**	16-65
FROM:	COMMUNITY DEVELOPMENT DIVISION	**FILE:**	14-05-0092
SUBJECT:	DEVELOPMENT PERMIT APPLICATION NO. 100830 (BEEDIE DEVELOPMENT GROUP / 27200 BLOCK OF 48 AVENUE)		

PROPOSAL:

Development Permit application to facilitate development of a truck parking/trailer storage/staging facility, and an accessory office building located on a 2.2 ha (5.5 ac) site in the 27200 Block of 48 Avenue in the Gloucester Industrial Area.



RECOMMENDATION SUMMARY:

That Council authorize issuance of Development Permit No. 100830 subject to nine (9) conditions plus four (4) conditions to be completed prior to issuance of a Building permit.

RATIONALE:

The proposal complies with the Gloucester Industrial Park Community Plan (and its Development Permit Guidelines) and with the site's General Industrial M-2A zoning.

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RECOMMENDATION:

That Council authorize issuance of Development Permit No. 100830 to 161884 Canada Inc. for property located in the 27200 Block of 48 Avenue subject to the following conditions:

a. Building plans being in substantial compliance with Schedules "A" and "B"
b. Landscape plans being in substantial compliance with Schedule "C " and in compliance with the Township's Street Tree and Boulevard Planting Policy to the acceptance of the Township;
c. All signage being in compliance with the Gloucester Development Permit Guidelines and the Township's Sign Bylaw;
d. Rooftop mechanical equipment to be located so that it is not visible from adjacent roads or alternatively screened from view by compatible architectural treatments;
e. Section 111.3 (required landscaping area along an interior side lot line) of the Township's Zoning Bylaw No. 2500 being varied from a minimum of 3.0 metres to 1.52 metres (along the north side of the panhandle access), and from 3.0 metres to 1.14 metres (along the south side of the panhandle access), as shown in Schedule "C".
f. All outdoor refuse areas to be located in an enclosure and screened to the acceptance of the Township;
g. All chain link fences being black vinyl with black posts and rails;
h. All outdoor storage areas being covered by a dust free surface; and further
i. Registration of a restrictive covenant limiting access to the site from 48 Avenue to left in and right out turning movements.

Although not part of the Development Permit requirements, the applicant is advised that prior to issuance of a building permit the following items will need to be finalized:

a. Submission of a site specific on-site servicing and stormwater management plan in accordance with the Subdivision and Development Servicing Bylaw;
b. Submission of an erosion and sediment control plan or exemption in accordance with the Erosion and Sediment Control Bylaw, to the acceptance of the Township;
c. On-site landscaping being secured by a letter of credit at the Building permit stage; and further
d. Payment of supplemental Development Permit application fees.

EXECUTIVE SUMMARY:

Beedie Development Group, on behalf of 161884 Canada Inc. has applied for a Development Permit for a truck parking/trailer storage/staging facility, and an accessory office building located in the Gloucester Industrial Area. The proposed development complies with the Township's land use policies and, in staff's opinion, with the Development Permit guidelines of the Gloucester Industrial Park Community Plan (see Attachment B).

PURPOSE:

This report is to provide information and recommendations concerning proposed Development Permit No. 100830 for property located in the 27200 Block of 48 Avenue in the Gloucester Industrial Area.

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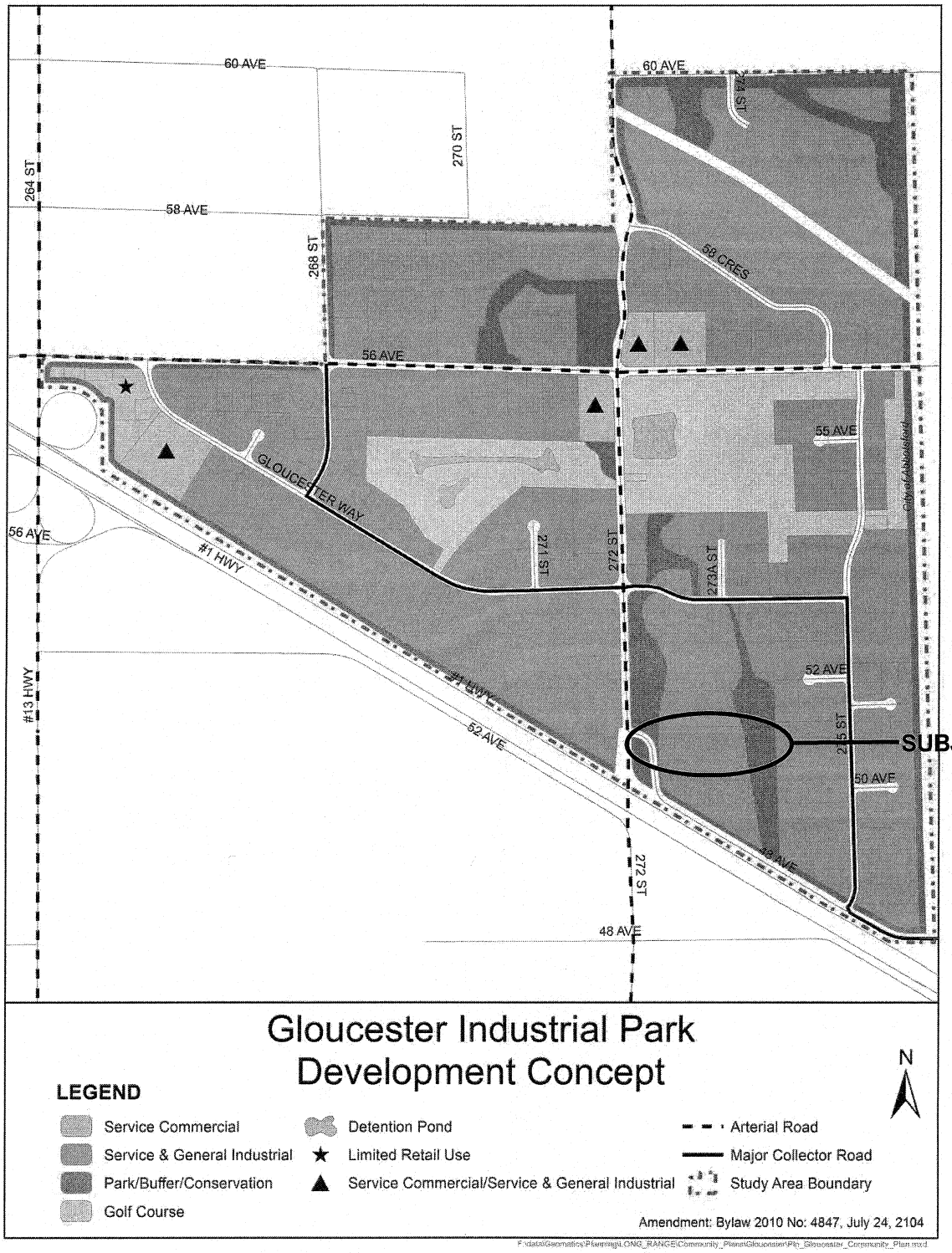
DEVELOPMENT PERMIT APPLICATION NO. 100830
(BEEDIE DEVELOPMENT GROUP / 27200 BLOCK OF 48 AVENUE)
Page 3 . . .



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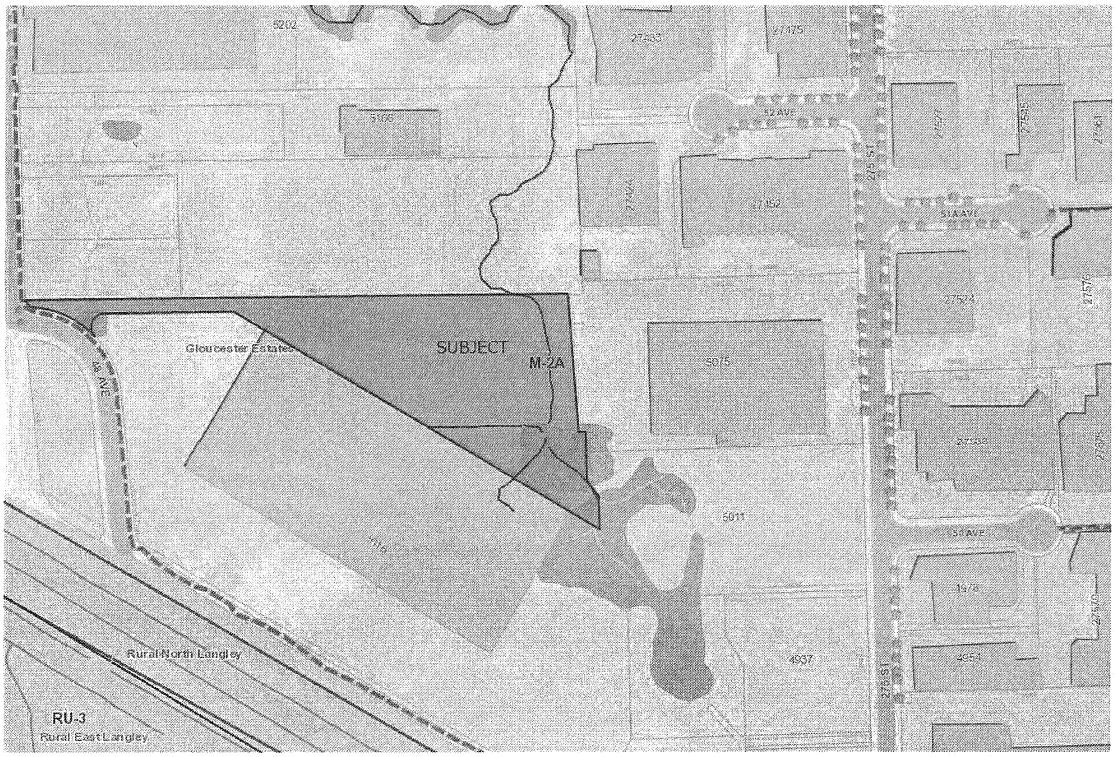

ZONING BYLAW NO. 2500

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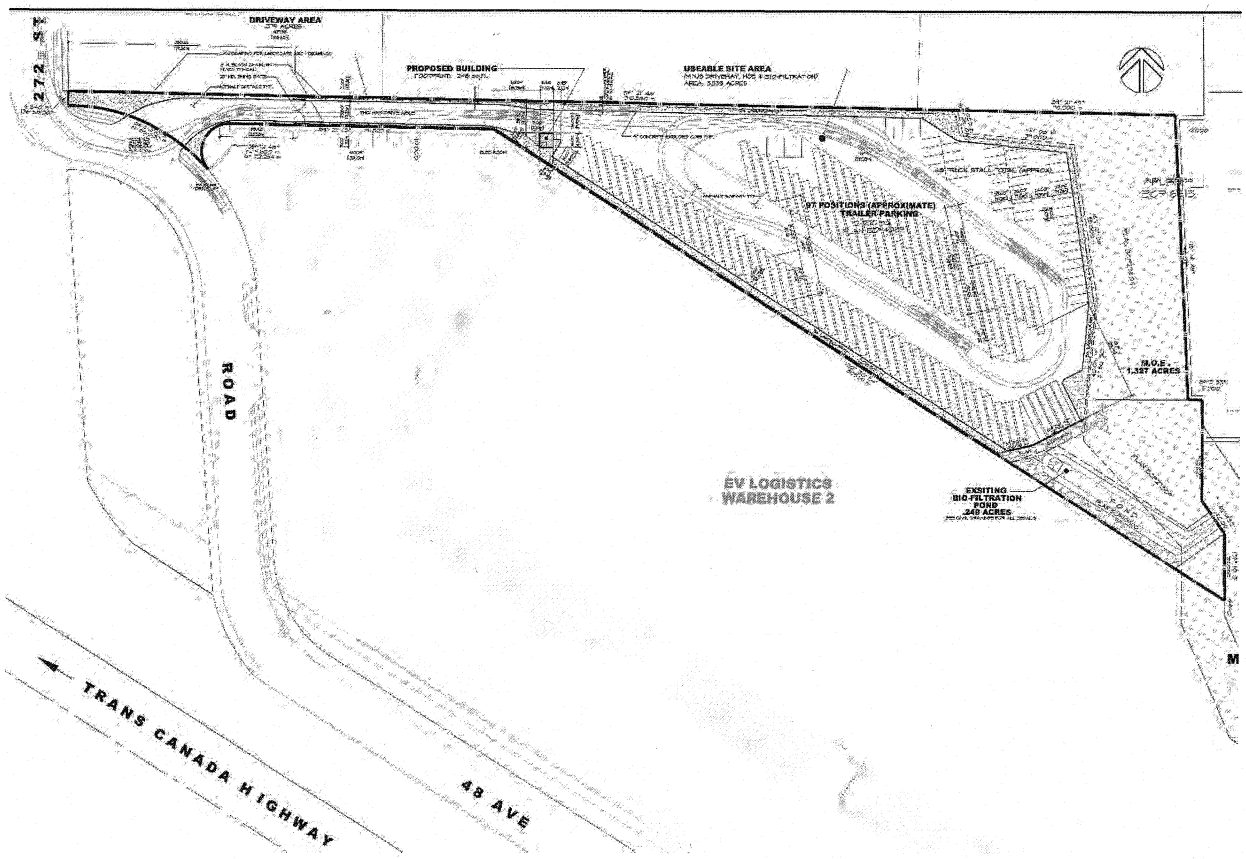
DEVELOPMENT PERMIT APPLICATION NO. 100830
(BEEDIE DEVELOPMENT GROUP / 27200 BLOCK OF 48 AVENUE)
Page 5 . . .



SITE PLAN PROVIDED BY THE APPLICANT

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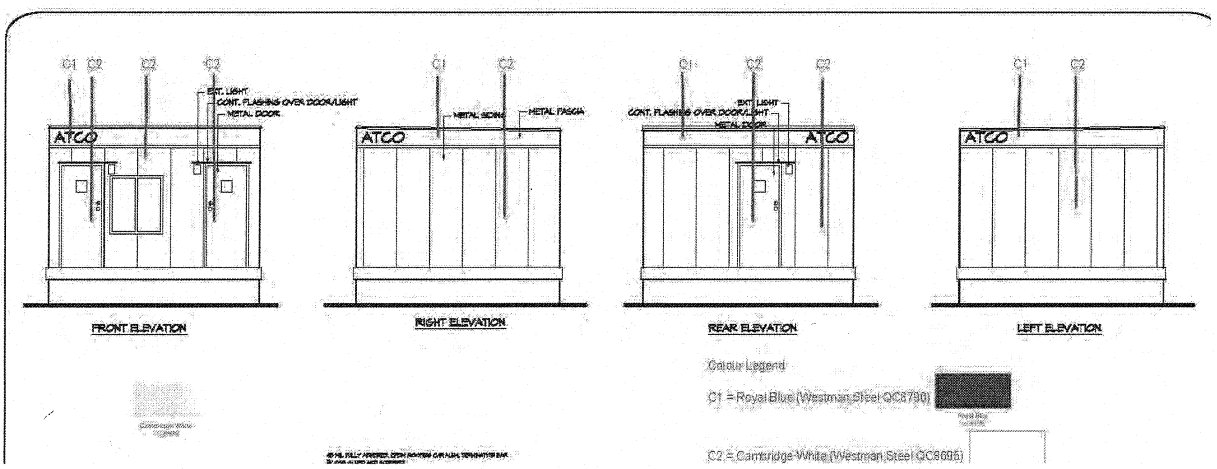

BUILDING ELEVATIONS PROVIDED BY THE APPLICANT

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REFERENCE:

Owner:	161884 Canada Inc. 3030 Gilmore Diversion Burnaby BC V5G 3B4
Location:	27200 Block of 48 Avenue
Area:	2.2 ha (5.5 ac)
Existing Zoning:	General Industrial Zone M-2A
Gloucester Industrial Park Community Plan:	Service and General Industrial and Park/Buffer/Conservation

BACKGROUND/HISTORY:

The subject property is designated for Service and General Industrial and Park/ Buffer/ Conservation purposes in the Gloucester Industrial Park Community Plan and is zoned General Industrial Zone M-2A. The property is designated a mandatory Development Permit area in the Gloucester Industrial Park Community Plan to provide Council the opportunity to review the form, character, and siting of the proposed development. Issuance of a Development Permit is required prior to issuance of a Building permit.

DISCUSSION/ANALYSIS:

The proposed development involves a 2 2 ha (5.5 ac) vacant site in the Gloucester Industrial Area. The subject property is a "panhandle lot" with minimal frontage on 48 Avenue east of 272 Street. The majority of the site is not vegetated, with the exception of the eastern portion of the lot, which contains treed environmental areas adjacent to the watercourse (all protected from disturbance by registration of a covenant at the time when the site was originally rezoned).

Due to the configuration of the lot and the presence of a large warehouse building (EV Logistics) on the lands to the south, the proposed development will be mainly screened from view from the adjacent streets (48 Avenue and 272 Street).

The application proposes development of a truck parking/ trailer storage/staging facility, and an accessory office building to be occupied by Pacific Coast Distribution Ltd. (a family owned trucking company). The applicant indicated that two (2) full time employees will be employed on the site. In accordance with Council's policy, a site plan and building elevations have been submitted detailing the proposed development's form, character, and siting. Proposed Development Permit No. 100830 is attached as Attachment A to this report.

Adjacent Uses:

Surrounding land uses include:

North:	Vacant land zoned General Industrial Zone M-2A designated "Service & General Industrial" and 'Park/Buffer/Conservation' in the Gloucester Community Plan.
South:	A property zoned General Industrial Zone M-2A occupied by EV Logistics designated 'Service & General Industrial" and 'Park/Buffer/Conservation' in the Gloucester Community Plan.
East:	A property zoned General Industrial Zone M-2A, occupied by Oldcastle Glass, designated "Service & General Industrial" in the Gloucester Community Plan.
West:	48 Avenue, beyond which is a vacant site zoned General Industrial Zone M-2A, designated "Park Buffer Conservation" in the Gloucester Community Plan.

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Development Permit:

The proposed development includes a truck parking /trailer storage/ staging facility for approximately 122 trucks. A 68.6 m² (738.4 ft ²) accessory office building is proposed at the eastern end of the 'panhandle' access strip. The truck parking/trailer storage/staging facility is proposed on the eastern portion of the lot.

Due to the shape of the lot and the presence of the building on the adjacent lot to the south, the proposed truck parking/trailer storage/staging facility elements of the business will be mainly screened from view from adjacent roads (48 Avenue and 272 Street).

The proposed office building (prefabricated "ATCO" structure) will be finished with metal cladding. The entire site (with the exception of landscaped areas and the protected environmental areas on the property's eastern edge) will be paved, providing adequate area for parking of trucks, trailer storage, staging, and employee parking.

The proposal complies with the site's M-2A zoning, with respect to lot coverage, siting and height. The Gloucester Design Committee reviewed the proposal and has no objections.

Signage:

No new signage is proposed in conjunction with this Development Permit. Any future signage will be required to comply with the Gloucester Development Permit Guidelines and the Township's Sign Bylaw.

Landscaping / Tree Protection:

Section 111.3 of the Zoning Bylaw requires a 3.0 m wide landscaping screen along interior side lot lines in all industrial zones. The landscape plan proposes to meet this requirement by providing tree and shrub plantings at the site entrance and around the perimeter of most of the site and adjacent to the protected environmental area.

The applicant is proposing to vary the above noted provisions of Section 111.3 of the Zoning Bylaw from a minimum of 3.0 metres to 1.52 metres (along the north side of the panhandle access) and from 3.0 metres to 1.14 metres (along the south side of the panhandle access). The proposed variance will enable functional vehicle movements on the site. Taking into consideration the site access conditions, staff support the requested variance that has been incorporated into Development Permit No. 100830.

An Integrated Site Design Concept (ISDC) was provided by applicant's consultants. The submitted tree management information indicates 29 significant trees on the site, which are all proposed to be removed.

In accordance with the Township's Subdivision and Development Servicing Bylaw (Schedule I – Tree Protection), a total of 126 replacement trees are to be planted on site. Overall, 126 trees will be in place subsequent to development on the subject site. Final tree retention, protection and replacement plans are subject to final acceptance by the Township.

Servicing and Access:

Full urban services exist to the subject site. As a condition of Building permit, a site specific on-site servicing and stormwater management plan (in accordance with the Subdivision and Development Servicing Bylaw) will be required including the provision of grease, oil, and sand interceptors. An Erosion and Sediment Control Permit or exemption will also be required (in accordance with the Erosion and Sediment Control Bylaw) to the acceptance of the Township.

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The site will be accessed from the existing driveway on 48 Avenue (just east of 272 Street). The existing driveway, however, will be widened to provide safe turning movements for large vehicles which will be accessing the site. The site access will be limited to left in and right out turning movements and will be secured via a Restrictive Covenant as a condition of Development Permit No. 100830. An existing streetlight near the entrance will be relocated to an appropriate location to allow for the proposed widening of the driveway.

Environmental Considerations:

The Township's Sustainability Charter includes environmental objectives to protect and enhance rivers, streams, wildlife habitats and environmentally sensitive areas in the Township. These environmental objectives are supported by policy and guidance outlined in the Township's Environmentally Sensitive Areas Study, Wildlife Habitat Conservation Strategy, Streamside Protection Bylaw, Erosion and Sediment Control Bylaw, and Subdivision and Development Servicing Bylaw (Schedule I – Tree Protection) which promote sound environmental management practices and outline Township environmental performance expectations. Full urban services exist to the subject site. The provision of stormwater management and sediment control measures and compliance with the Township's Subdivision and Development Servicing Bylaw (Schedule I – Tree Protection) satisfies the objectives of the Sustainability Charter.

POLICY CONSIDERATIONS:

The proposed development complies with the site's Service and General Industrial designation in the Gloucester Industrial Park Community Plan, and the General Industrial M-2A zone requirements. A variance regarding landscaping requirements along the site's panhandle access strip has been incorporated in the Development Permit. The proposal, in staff's opinion, is in compliance with the Development Permit Guidelines of the Gloucester Industrial Park Community Plan (Attachment B).

Staff have notified adjacent property owners that this Development Permit application is being considered at the June 27, 2016 meeting, and they may attend and speak to the matter should they deem it necessary.

Council's consideration of the Development Permit must be based on the form, character and siting of the proposal. Staff recommend that the Development Permit be issued as attached.

Respectfully submitted,

Zorica Andjelic
DEVELOPMENT PLANNER
for
COMMUNITY DEVELOPMENT DIVISION

ATTACHMENT A	Development Permit No. 100830 and Schedules "A" through "C": SCHEDULE A – Site Plan SCHEDULE B – Building Elevations SCHEDULE C – Landscape Plan
ATTACHMENT B	Excerpt from the Gloucester Industrial Park Community Plan – Development Permit Guidelines

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ATTACHMENT A

THE CORPORATION OF THE TOWNSHIP OF LANGLEY

Development Permit No. 100830

This Permit is issued this _____day of _____ 2016

1. Name: 161884 Canada Inc.

   Address: 3030 Gilmore Avenue
   Burnaby BC V5G 3B4

2. This permit applies to and only to those lands within the Municipality described as follows and to any and all buildings, structures and other development thereon:

   LEGAL DESCRIPTION: Lot 1 Section 5 Township 14 NWD PLAN BCP40897

   CIVIC ADDRESS: 27200 block of 48 Avenue

3. This Permit is issued subject to compliance with all of the Bylaws of the Municipality of Langley applicable thereto, except as specifically varied or supplemented by this permit as follows:

   a. Building plans being in substantial compliance with Schedules "A" and "B"
   b. Landscape plans being in substantial compliance with Schedule "C " and in compliance with the Township's Street Tree and Boulevard Planting Policy to the acceptance of the Township;
   c. All signage being in compliance with the Gloucester Development Permit Guidelines and the Township's Sign Bylaw;
   d. Rooftop mechanical equipment to be located so that it is not visible from adjacent roads or alternatively screened from view by compatible architectural treatments;
   e. Section 111.3 (required landscaping area along an interior side lot line) of the Township's Zoning Bylaw No. 2500 being varied from a minimum of 3.0 metres to 1.52 metres (along the north side of the panhandle access), and from 3.0 metres to 1.14 metres (along the south side of the panhandle access), as shown in Schedule "C";
   f. All outdoor refuse areas to be located in an enclosure and screened to the acceptance of the Township;
   g. All chain link fences being black vinyl with black posts and rails;
   h. All outdoor storage areas being covered by a dust free surface; and further
   i. Registration of a restrictive covenant limiting access to the site from 48 Avenue to left in and right out turning movements.

   Although not part of the Development Permit requirements, the applicant is advised that prior to issuance of a building permit the following items will need to be finalized:

   a. Submission of a site specific on-site servicing and stormwater management plan in accordance with the Subdivision and Development Servicing Bylaw;
   b. Submission of an erosion and sediment control plan or exemption in accordance with the Erosion and Sediment Control Bylaw, to the acceptance of the Township;
   c. On-site landscaping being secured by a letter of credit at the Building Permit stage; and further
   d. Payment of supplemental Development Permit application fees.

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4. The land described herein shall be developed strictly in accordance with the terms, conditions and provisions of this Permit and any plans and specifications attached as a Schedule to this Permit which shall form a part hereof.

   This Permit is not a Building Permit.

   All developments forming part of this Development Permit shall be substantially commenced within two years after the date the Development Permit is issued.

   This permit shall have the force and effect of a restrictive covenant running with the land and shall come into force on the date of an authorizing resolution passed by Council.

   It is understood and agreed that the Municipality has made no representations, covenants, warranties, guarantees, promises or agreement (verbal or otherwise) with the developer other than those in this Permit.

   This Permit shall ensure to the benefit of and be binding upon the parties hereto and their respective heirs, executors, administrators, successors and assigns.

AUTHORIZING RESOLUTION PASSED BY COUNCIL THIS ____ DAY OF _____, 2016

Attachments:

SCHEDULE A	Site Plan
SCHEDULE B	Building Elevations
SCHEDULE C	Landscape Plan

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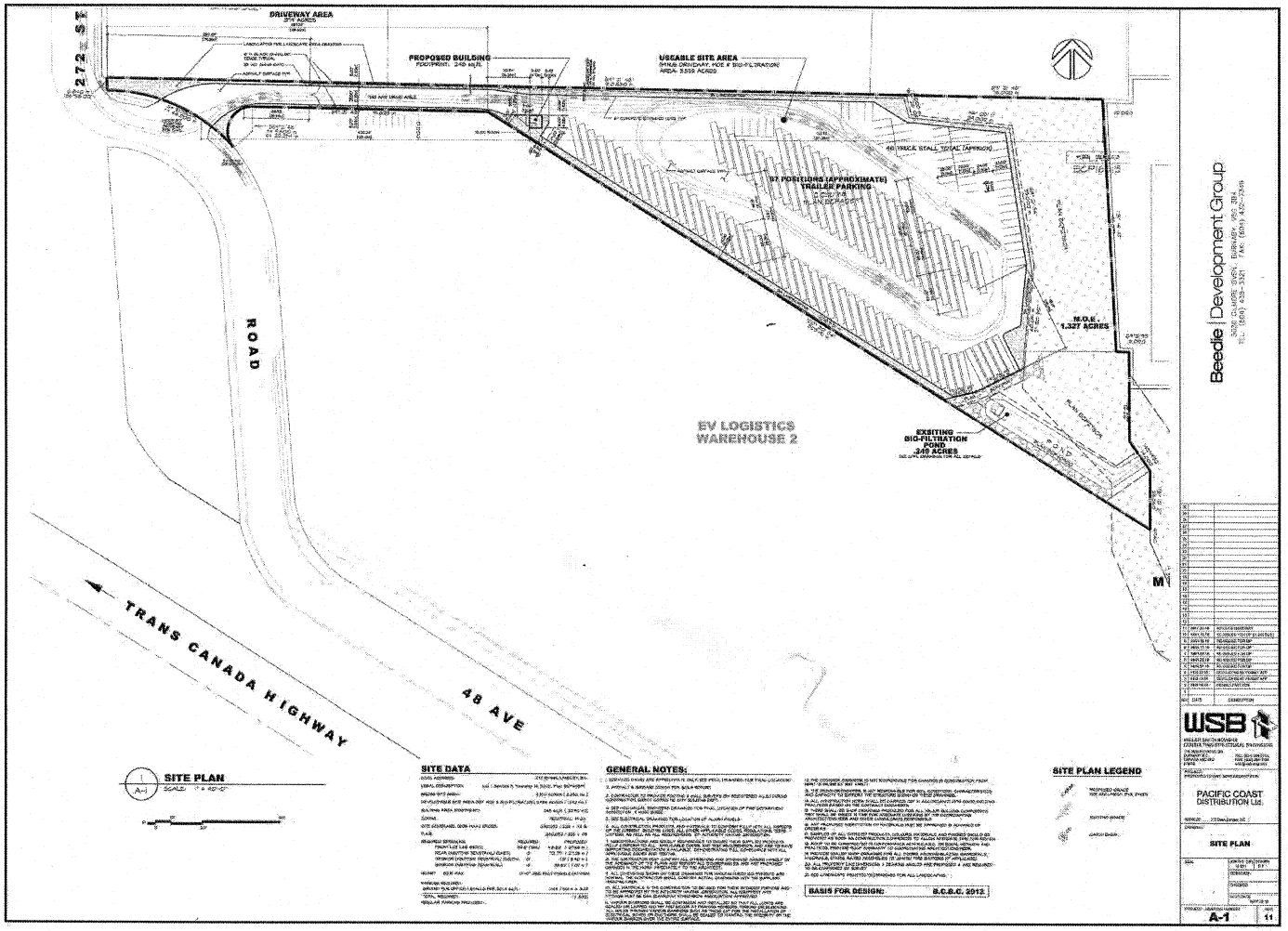

Township of Langley
Est. 1873

SCHEDULE A
SITE PLAN

B.2

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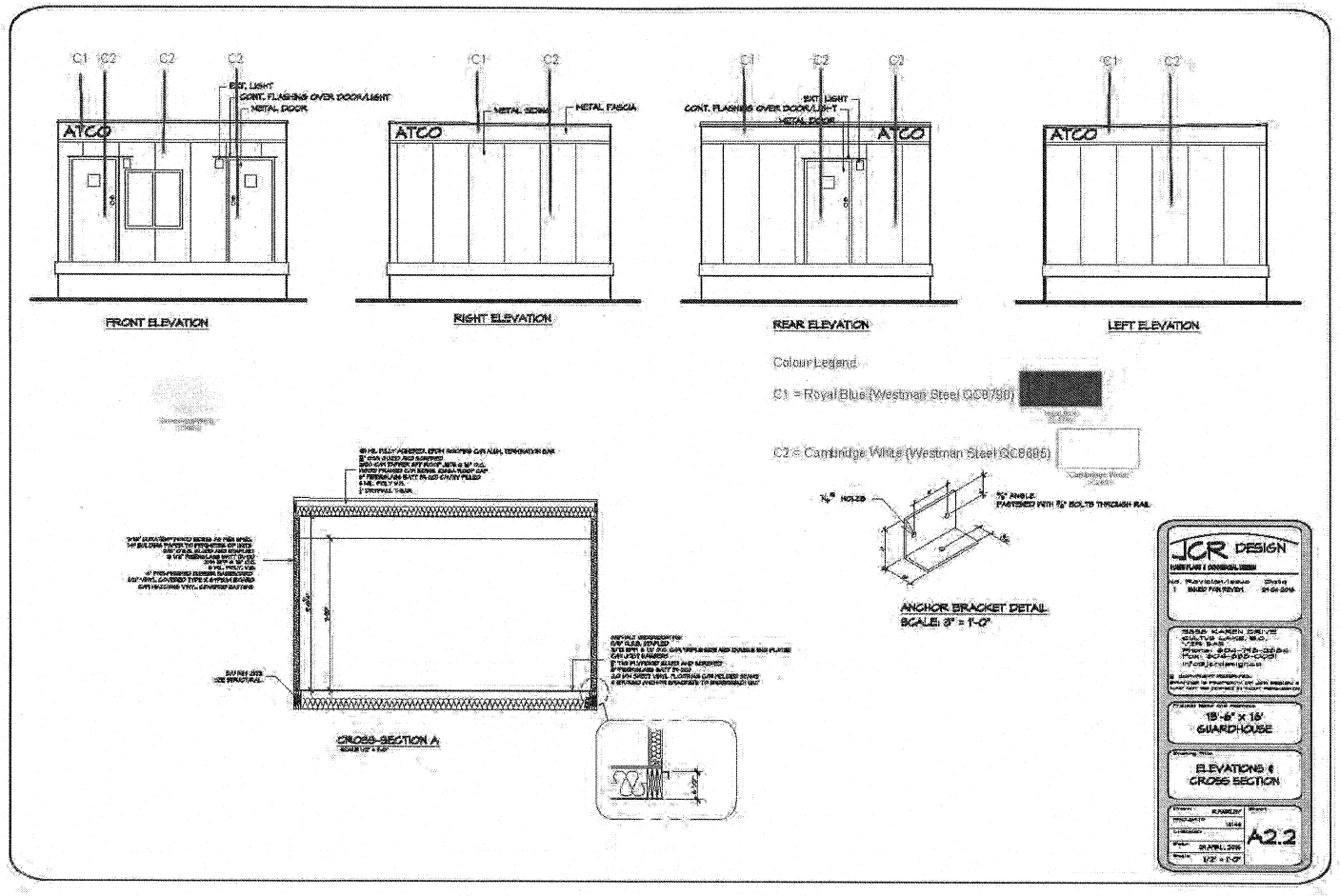


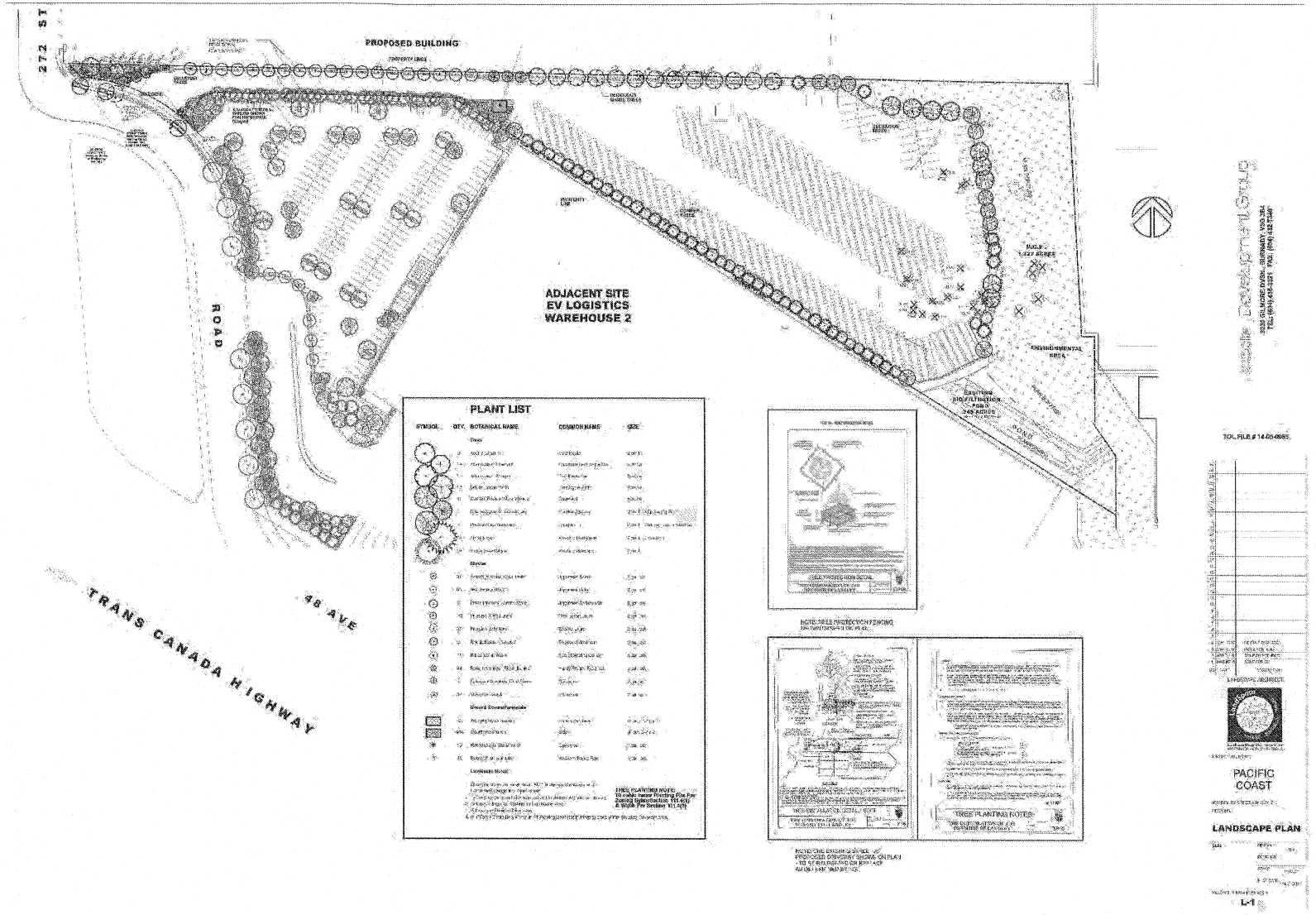
Township of Langley

Est. 1873

SCHEDULE B
BUILDING ELEVATIONS

B.2

Document Released Under the Access to Information Act / Document divulgué en vertu de la Loi sur l'accès à l'information.



Township of Langley

Est. 1873

SCHEDULE C
LANDSCAPE PLAN

B.2

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3.0 DEVELOPMENT STRATEGY

There is no need for the Township Of Langley to consider expansion of services to the subject area to permit industrial development. Development of services to the areas and consideration of zoning of properties in the area to industrial and commercial uses will only be considered on the basis of a comprehensive development for the subject lands. The Township Of Langley will not be developing capital expenditure programs for the subject area and considers the area unsuitable for industrial and commercial uses until municipal water and sewage systems are developed and a program to upgrade the drainage system, roadways and park requirements is proposed and adopted. Development of services will only proceed on the property owners request and agreement to pay the cost of developing services.

4.0 DEVELOPMENT PERMIT GUIDELINES

#2812
25/06/9

In a Development Permit Area, before a building permit may be obtained, a Development Permit must first be issued by Council. Council may set forth conditions under which development may take place that may be in addition to normal zoning requirements and the developer's Statutory Building Scheme registered as a charge against the lands pursuant to Section 216(1) of the Land Title Act.

Form and Character

- Building design, materials and exterior finish and landscaping shall support the creation of an attractive, high quality estate industrial environment and shall conform to the provisions of Gloucester's Statutory Building Scheme;

- Low profile building designs are encouraged, particularly adjacent to residential and rural areas as well as the No. 1 Highway;

- Commercial buildings are encouraged to incorporate "pitched" roofs or other similar roof treatment into the building design;

- The use of smooth surfaced, light coloured building materials, finished, painted "tilt-up" concrete panels, acrylic stucco, brick, baked enamel finished metal siding, or metal panels is encouraged;

- The use of untreated or unfinished concrete, metal or aluminum as a final building finish will not be permitted;

- Building design, layout, siting, landscaping, screening and buffering shall reflect the need to reduce noise impacts from the No. 1 Highway and between industrial development and adjacent uses;

- Buildings on corner sites or on lots backing onto roads shall be designed to recognize the building's visibility from more than one street with continuity of design, materials, exterior finish, signage and landscaping;

- Roof top mechanical equipment shall be hidden behind screens designed as an integral part of a building, or parapets may be extended to conceal such equipment;

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- Underground utilities shall be provided;
- Building plans submitted in support of a Development Permit shall:
    - Be of sufficient detail to convey the intent of the design in terms of the building's appearance, exterior finish, materials and colour treatments;
    - Be prepared by an architect registered in B.C.;
    - Include a coloured rendering or perspective drawing and typical building elevations;
    - Include a coloured site plan indicating the siting of all buildings and structures, property lines, dimensions, easements, rights of way, roads, areas, phasing and significant physical features;
    - Include a detailed statement of land and building uses, lot sizes, coverage, building height, staging and the location and dimensions of landscape and buffer areas.

Landscape Areas and Buffers

Landscape plans submitted in support of a Development Permit shall:

- Be of sufficient detail to convey the intent of the landscape design;
- Complement the objective of creating an attractive, high quality industrial environment;
- Comply with the Landscape Design Guidelines attached as Appendix "A" to the developer's Statutory Building Scheme;
- Be prepared by a landscape architect registered in B.C.;
- Include a detailed plant list, quantity and sizing of plant material;
- Include fencing design, material and specifications;
- Include a cost estimate of the value of the landscape works including fencing and installation (of both the landscape works and fencing);
- Include boulevard treatment and street tree plantings in accordance with the Township's Boulevard Treatment and Street Tree Policy;
- At the building permit stage, be secured by a letter of credit;
- In buffer and building setback areas on-site natural vegetation shall be encouraged to be retained wherever practical;

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- No site development works involving the removal of natural vegetation in the buffer or setback areas shall take place until after the Development Permit has been issued;

- Natural vegetation or berming adjacent to the No. 1 Highway shall not be removed unless specifically authorized by the Development Permit;

- The width of the undisturbed natural vegetation area adjacent to the No. 1 Highway shall be a minimum of 15m except where lands are designated for Service Commercial purposes the width of the required landscaping adjacent to the No. 1 Highway shall be a minimum of 7.5m;

#3850
19/07/99

- Adjacent to the No. 1 Highway, where no natural vegetation exists or where natural vegetation is specifically authorized to be removed by the Development Permit, it shall be replaced by a combination of landscape works and berming;

- Berms, where required, shall be a minimum of 1.8m height and be landscaped with evergreen shrubs/hedges and other plantings forming a continuous opaque screen;

- Adjacent to the street (other than the No. 1 Highway) a minimum 5m wide landscape area is required;

- Adjacent to residential or rural areas, a minimum 10m wide landscape area/buffer is required, plus a 1.8m high (minimum) fence designed to reduce the visual and noise impacts of the industrial use on adjacent lands;

- Parking areas are to be landscaped and shall not occupy more than 25% of the front yard of a building;

- Outside storage areas are to be screened; and

- Refuse collection areas shall be enclosed within a building or screened by a combination of walls, fencing and landscaping.

Signs

Sign plans submitted in support of the Development Permit application shall:

- Be in accordance with the developer's Statutory Building Scheme and the Township's Sign Control Bylaw;

- Be prepared by a professional graphic designer showing the location, type, size, colour and height of all signs, logos, graphics, symbols and colours to be located on all buildings and on free-standing signs;

- Complement the building's design scheme;

- Involve only one free-standing sign containing only the corporate names and street numbers on its face;

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- No illuminated sign creating a glare or reflection on any building or street shall be permitted;

- Signs shall only identify those businesses located within the building itself.

Conservation Areas

Creek and gully areas should be retained in private ownership and developed to ensure definition and protection of sensitive areas. These creek and gully areas are undevelopable and should be protected to serve as drainage courses, fish and wildlife habitats and to ensure development does not occur in areas of unstable soil conditions. Creek and gully areas should not be cleared and development should be set back from the top of the bank. Site specific study is required to determine the setback.

Technical Report No. 807 entitled "Guidelines for Land Development and Protection of the Aquatic Environment" prepared by the Department of Fisheries and Oceans Canada, July 1978, is to be used as a guideline for determining setbacks for development adjacent to fish bearing streams. The Township may require the property owner to have prepared a report certified by a professional geotechnical or Civil Engineer to assist in determining what conditions of development are required to protect development from hazardous conditions.

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From: Engelsjord, Michael
Sent: August-16-16 1:37 PM
To: Rotinsky, Brenda; Billard, Karen
Subject: More info: West Creek, TOL
Attachments: FW: truck parking facility...; FW: Gloucester neighbourhood residents hope to put the brakes on truck park proposal - Langley Times; FW: Letter: Salmon habitat being put at risk in Gloucester Industrial Estates - Langley Times; FW: Truck parking facility - Gloucester Industrial Estates....; FW: Truck parking facility - Gloucester Industrial Estates....

Fyi – More information on the site we discussed with MP Aldag.

Michael Engelsjord, B.Sc., R.P.Bio.

Team Leader, Fisheries Protection Program / Ecosystem Management Branch
Fisheries and Oceans Canada / Government of Canada
Michael.Engelsjord@dfo-mpo.gc.ca / Tel. : 604-666-2365

Chef d'équipe, Programme de protection des pêches / Direction des écosystèmes
Pêches et Océans Canada / Gouvernement du Canada
Michael.Engelsjord@dfo-mpo.gc.ca / Tél. : 604-666-2365

Document Released Under the Access to Information Act / Document divulgué en vertu de la Loi sur l'accès à l'information.

From: Schaefer, Robert
Sent: August-16-16 11:28 AM
To: FPP.Pac / PPP.Pac (DFO/MPO)
Cc: Nanson, Dave; Crowe, Michael
Subject: FW: truck parking facility...

Categories: Mike

s.19(1)

-----Original Message-----
From: Petrina Arnason [mailto:parnason@tol.ca]
Sent: 2016–August-16 8:52 AM
To: Schaefer, Robert
Cc:
Subject: truck parking facility...

Dear Robert,
I am writing to follow up on the referenced development to advise that can be reached at should you wish to contact them during my absence
Regards,
Councillor Petrina Arnason
Township of Langley

Document Released Under the Access to Information Act / Document divulgué en vertu de la Loi sur l'accès à l'information.

From: Schaefer, Robert
Sent: August-16-16 11:27 AM
To: FPP.Pac / PPP.Pac (DFO/MPO)
Cc: Nanson, Dave; Crowe, Michael
Subject: FW: Gloucester neighbourhood residents hope to put the brakes on truck park proposal - Langley Times

Categories: Mike

-----Original Message-----
From: Petrina Arnason [mailto:parnason@tol.ca]
Sent: 2016–August-15 1:48 PM
To: Schaefer, Robert
Subject: Gloucester neighbourhood residents hope to put the brakes on truck park proposal - Langley Times

http://www.langleytimes.com/news/385614101.html?mobile=true

Councillor Petrina Arnason
Township of Langley

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From: Schaefer, Robert
Sent: August-16-16 11:26 AM
To: FPP.Pac / PPP.Pac (DFO/MPO)
Cc: Nanson, Dave; Crowe, Michael
Subject: FW: Letter: Salmon habitat being put at risk in Gloucester Industrial Estates - Langley Times

Categories: Mike

-----Original Message-----
From: Petrina Arnason [mailto:parnason@tol.ca]
Sent: 2016–August-15 1:50 PM
To: Schaefer, Robert
Subject: Letter: Salmon habitat being put at risk in Gloucester Industrial Estates - Langley Times

http://www.langleytimes.com/opinion/letters/387836152.html?mobile=true

Councillor Petrina Arnason
Township of Langley

Document Released Under the Access to Information Act / Document divulgué en vertu de la Loi sur l'accès à l'information.

From: Schaefer, Robert
Sent: August-16-16 11:24 AM
To: FPP.Pac / PPP.Pac (DFO/MPO)
Cc: Nanson, Dave; Crowe, Michael
Subject: FW: Truck parking facility - Gloucester Industrial Estates....
Attachments: Scanned from a Xerox Multifunction Printer.pdf; ATT00001.htm

Categories: Mike

s.13(1)(d)
s.16(2)
s.21(1)(b)

Hello,

I am forwarding this information to you on behalf of Petrina Arnason, Councillor for the Township of Langley regarding the above noted truck parking facility in the Gloucester Industrial Estates at 60th avenue and 272 street in Aldergrove, which will border the riparian area of West Creek. [redacted]

Attached is a letter from a development planner of the Township of Langley to the Triage Unit adding a condition that the DFO ensures that the development application complies with all federal government statutes and regulations. The councillor was not sure if this letter was ever sent to the triage unit.

I will also forward further information from Councillor Arnason regarding the project in following emails.

Regards,

Robert Schaefer
A/Community Advisor
South of Fraser Area and Eastern Fraser Valley
Ecosystems Management Branch/Gestion des Écosystèmes Branche
Fisheries and Oceans Canada/Pêches et Océans du Canada
Cell/cellulaire: [redacted]
Facsimile/Télécopie: 604 666-6624

From: Petrina Arnason [mailto:parnason@tol.ca]
Sent: 2016–August-15 1:11 PM
To: Schaefer, Robert
Subject: Fwd: Truck parking facility - Gloucester Industrial Estates....

Dear Bob,
Thank you very much for taking the time to discuss this with me today. I am forwarding the correspondence from the TOL and hope that the referenced staff reports will be included. If not, can you please let me know and I will forward those to you under separate cover.
Regards,
Councillor Petrina Arnason
Township of Langley

Begin forwarded message:

Document Released Under the Access to Information Act / Document divulgué en vertu de la Loi sur l'accès à l'information.

From: Ramin Seifi <rseifi@tol.ca>
Date: August 11, 2016 at 2:06:15 PM PDT
To: Petrina Arnason <parnason@tol.ca>
Cc: Mark Bakken <mbakken@tol.ca>, Wendy Bauer <wbauer@tol.ca>
Subject: RE: Truck parking facility - Gloucester Industrial Estates....

Further to previous communication, below, please see attached for your information.

From: Ramin Seifi
Sent: Tuesday, August 9, 2016 4:15 PM
To: Petrina Arnason <parnason@tol.ca>
Cc: Mark Bakken <mbakken@tol.ca>; Wendy Bauer <wbauer@tol.ca>
Subject: RE: Truck parking facility - Gloucester Industrial Estates....

Councillor Arnason;

In response to your enquiry, I can advise that staff is currently in the process of finalizing a letter to be sent to Fisheries and Oceans Canada (DFO), based on Council's direction. Initial contact was made to determine the appropriate staff contact at DFO, necessitated by recent organizational and regulatory changes in DFO.

I will provide you with a copy of the letter once finalized later this week.

As to current activity at the development site, I understand that it relates to installation of required fencing and signage around the environmentally protected area.

Thank you.

From: Petrina Arnason
Sent: Tuesday, August 9, 2016 11:47 AM
To: Mark Bakken <mbakken@tol.ca>
Cc: Ramin Seifi <rseifi@tol.ca>
Subject: Re: Truck parking facility - Gloucester Industrial Estates....

Dear Mark,
I am writing further to the referenced amendment with respect to Fisheries being advised of this development permit and am wondering when they were contacted and if there is a file # that I can reference.
Regards,
Councillor Petrina Arnason
Township of Langley

On Aug 9, 2016, at 11:25 AM, Wendy Bauer <wbauer@tol.ca> wrote:

> Hello Councillor Arnason,
>
> Below please find the item from the Draft Minutes from the Council minutes for the Evening meeting on July 25, 2016
>
> **July 25, 2016**
> **Regular Evening Council Meeting Minutes**
>
> **M. ITEMS FROM PRIOR MEETINGS**

Document Released Under the Access to Information Act / Document divulgué en vertu de la Loi sur l'accès à l'information.

1. **Development Permit Application No. 100830**

(BEEDIE DEVELOPMENT GROUP / 27200 BLOCK OF 48 AVENUE)

Report 16-75
File CD 14-05-0092

Moved by Councillor Fox,
Seconded by Councillor Quaale,
That Council authorize issuance of Development Permit No.100830 to 161884 Canada Inc. for property located in the 27200 block of 48 Avenue, subject to the following conditions:

a. Building plans being in substantial compliance with Schedules "A" and "B"
b. Landscape plans being in substantial compliance with Schedule "C " and in compliance with the Township's Street Tree and Boulevard Planting Policy to the acceptance of the Township;
c. All signage being in compliance with the Gloucester Development Permit Guidelines and the Township's Sign Bylaw;
d. Rooftop mechanical equipment to be located so that it is not visible from adjacent roads or alternatively screened from view by compatible architectural treatments;
e. Section 111.3 (required landscaping area along an interior side lot line) of the Township's Zoning Bylaw No. 2500 being varied from a minimum of 3.0 metres to 1.52 metres (along the north side of the panhandle access), and from 3.0 metres to 1.14 metres (along the south side of the panhandle access), as shown in Schedule "C".
f. All outdoor refuse areas to be located in an enclosure and screened to the acceptance of the Township;
g. All chain link fences being black vinyl with black posts and rails;
h. All outdoor storage areas being covered by a dust free surface; and further
i. Registration of a restrictive covenant limiting access to the site from 48 Avenue to left-in and right-out turning movements.

Although not part of the Development Permit requirements, the applicant is advised that prior to issuance of a building permit the following items will need to be finalized:

a. Submission of a site specific on-site servicing and stormwater management plan in accordance with the Subdivision and Development Servicing Bylaw;
b. Submission of an erosion and sediment control plan or exemption in accordance with the Erosion and Sediment Control Bylaw, to the acceptance of the Township;
c. On-site landscaping being secured by a letter of credit at the Building permit stage; and further
d. Payment of supplemental Development Permit application fees.

AMENDMENT
Moved by Councillor Richter,
Seconded by Councillor Arnason,
That the following condition be added as condition "J":

The Township of Langley advise the Department of Fisheries and Ocean's (DFO) of the application, and request that the DFO ensures that Development Application No. 100830 complies with all applicable Federal Government statues and regulations.

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M. ITEMS FROM PRIOR MEETINGS

CARRIED

Mayor Froese and Councillors Quaale and Whitmarsh opposed

MAIN MOTION, AS AMENDED
The question was called on the Main Motion, as amended, and it was
CARRIED

Councillor Arnason opposed

Wendy Bauer, CRM | Deputy Township Clerk
Corporate Administration Division | Township of Langley
20338 – 65 Avenue, Langley, BC V2Y 3J1
Direct Line: 604.533.6101
Web | Facebook | Twitter | YouTube

-----Original Message-----
From: Petrina Arnason
Sent: Tuesday, August 09, 2016 10:46 AM
To: Mark Bakken <mbakken@tol.ca>
Cc: Wendy Bauer <wbauer@tol.ca>; Ramin Seifi <rseifi@tol.ca>
Subject: Truck parking facility - Gloucester Industrial Estates....

Dear Wendy,
I hope that you are doing well. I understand that a crew has now started work on the referenced development site in and around the West Creek riparian area. Can you please forward the collective conditions that were approved by Council at our last meeting, including the reference to oversight by the DFO further to the approval of their Development Permit?
Many thanks,
Councillor Petrina Arnason
Township of Langley

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Township of Langley

Est. 1873

August 11, 2016

Project: 14-05-0092
Folder: DP100830

Triage & Planning Unit
Fisheries Protection Program
Ecosystem Management Branch
Fisheries and Oceans Canada
200 - 401 Burrard Street
Vancouver, British Columbia V6C 3S4

Re: Project No. 14-05-0092 / BEEDIE DEVELOPMENT GROUP

Please be advised that Municipal Council at its meeting of July 25, 2016 authorized by resolution the issuance of Development Permit No. 100830 with an additional condition. According to the draft minutes, Council added the following:

j. The Township of Langley advise the Department of Fisheries and Oceans (DFO) of the application, and request that the DFO ensures that Development Application No. 100830 complies with all applicable Federal Government statutes and regulations.

Enclosed is a copy of Development Permit No. 100830 for your records, as well as the relevant reports to Council.

Yours truly,

Robert Knall

for Zorica Andjelic
DEVELOPMENT PLANNER

s.19(1) RK/ba
Att

copy: Beedie Development Group (Attention: [redacted]

f:\data\tempest\prospero\plandev\dp\dp100830\dp issuance letter.docx

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From: Schaefer, Robert
Sent: August-16-16 11:26 AM
To: FPP.Pac / PPP.Pac (DFO/MPO)
Cc: Nanson, Dave; Crowe, Michael
Subject: FW: Truck parking facility - Gloucester Industrial Estates....

Categories: Mike

From: Petrina Arnason [mailto:parnason@tol.ca]
Sent: 2016–August-15 1:11 PM
To: Schaefer, Robert
Subject: Fwd: Truck parking facility - Gloucester Industrial Estates....

Dear Bob,
Thank you very much for taking the time to discuss this with me today. I am forwarding the correspondence from the TOL and hope that the referenced staff reports will be included. If not, can you please let me know and I will forward those to you under separate cover.
Regards,
Councillor Petrina Arnason
Township of Langley

Begin forwarded message:

> **From:** Ramin Seifi <rseifi@tol.ca>
> **Date:** August 11, 2016 at 2:06:15 PM PDT
> **To:** Petrina Arnason <parnason@tol.ca>
> **Cc:** Mark Bakken <mbakken@tol.ca>, Wendy Bauer <wbauer@tol.ca>
> **Subject: RE: Truck parking facility - Gloucester Industrial Estates....**
>
> Further to previous communication, below, please see attached for your information.

> **From:** Ramin Seifi
> **Sent:** Tuesday, August 9, 2016 4:15 PM
> **To:** Petrina Arnason <parnason@tol.ca>
> **Cc:** Mark Bakken <mbakken@tol.ca>; Wendy Bauer <wbauer@tol.ca>
> **Subject:** RE: Truck parking facility - Gloucester Industrial Estates....
>
> Councillor Arnason;
>
> In response to your enquiry, I can advise that staff is currently in the process of finalizing a letter to be sent to Fisheries and Oceans Canada (DFO), based on Council's direction. Initial contact was made to determine the appropriate staff contact at DFO, necessitated by recent organizational and regulatory changes in DFO.
>
> I will provide you with a copy of the letter once finalized later this week.

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As to current activity at the development site, I understand that it relates to installation of required fencing and signage around the environmentally protected area.

Thank you.

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Subject: Re: Truck parking facility - Gloucester Industrial Estates....

Dear Mark,
I am writing further to the referenced amendment with respect to Fisheries being advised of this development permit and am wondering when they were contacted and if there is a file # that I can reference.
Regards,
Councillor Petrina Arnason
Township of Langley

On Aug 9, 2016, at 11:25 AM, Wendy Bauer <wbauer@tol.ca> wrote:

Hello Councillor Arnason,

Below please find the item from the Draft Minutes from the Council minutes for the Evening meeting on July 25, 2016

July 25, 2016
Regular Evening Council Meeting Minutes

M. ITEMS FROM PRIOR MEETINGS

1. Development Permit Application No. 100830

(BEEDIE DEVELOPMENT GROUP / 27200 BLOCK OF 48 AVENUE)
Report 16-75
File CD 14-05-0092

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Seconded by Councillor Quaale,
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M. ITEMS FROM PRIOR MEETINGS

e. Section 111.3 (required landscaping area along an interior side lot line) of the Township's Zoning Bylaw No. 2500 being varied from a minimum of 3.0 metres to 1.52 metres (along the north side of the panhandle access), and from 3.0 metres to 1.14 metres (along the south side of the panhandle access), as shown in Schedule "C".
f. All outdoor refuse areas to be located in an enclosure and screened to the acceptance of the Township;
g. All chain link fences being black vinyl with black posts and rails;
h. All outdoor storage areas being covered by a dust free surface; and further
i. Registration of a restrictive covenant limiting access to the site from 48 Avenue to left-in and right-out turning movements.

Although not part of the Development Permit requirements, the applicant is advised that prior to issuance of a building permit the following items will need to be finalized:

a. Submission of a site specific on-site servicing and stormwater management plan in accordance with the Subdivision and Development Servicing Bylaw;
b. Submission of an erosion and sediment control plan or exemption in accordance with the Erosion and Sediment Control Bylaw, to the acceptance of the Township;
c. On-site landscaping being secured by a letter of credit at the Building permit stage; and further
d. Payment of supplemental Development Permit application fees.

AMENDMENT
Moved by Councillor Richter,
Seconded by Councillor Arnason,
That the following condition be added as condition "J":

The Township of Langley advise the Department of Fisheries and Ocean's (DFO) of the application, and request that the DFO ensures that Development Application No. 100830 complies with all applicable Federal Government statues and regulations.
CARRIED

Mayor Froese and Councillors Quaale and Whitmarsh opposed

MAIN MOTION, AS AMENDED
The question was called on the Main Motion, as amended, and it was
CARRIED

Councillor Arnason opposed

Wendy Bauer, CRM | Deputy Township Clerk
Corporate Administration Division | Township of Langley
20338 – 65 Avenue, Langley, BC V2Y 3J1
Direct Line: 604.533.6101
Web | Facebook | Twitter | YouTube

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-----Original Message-----
From: Petrina Arnason
Sent: Tuesday, August 09, 2016 10:46 AM
To: Mark Bakken <mbakken@tol.ca>
Cc: Wendy Bauer <wbauer@tol.ca>; Ramin Seifi <rseifi@tol.ca>
Subject: Truck parking facility - Gloucester Industrial Estates....

Dear Wendy,
I hope that you are doing well. I understand that a crew has now started work on the referenced development site in and around the West Creek riparian area. Can you please forward the collective conditions that were approved by Council at our last meeting, including the reference to oversight by the DFO further to the approval of their Development Permit?
Many thanks,
Councillor Petrina Arnason
Township of Langley

Pages 487 to / à 488

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From: Billard, Karen
Sent: August-24-16 3:54 PM
To: Engelsjord, Michael; Rotinsky, Brenda
Subject: RE: Voicemail messages...

Was there ever a request for review sent in or is the council's info all we have?

-----Original Message-----
From: Engelsjord, Michael
Sent: 2016–August-24 3:32 PM
To: Billard, Karen; Rotinsky, Brenda
Subject: Fw: Voicemail messages...

Probably best if one of you follow up.

----- Original Message -----
From: Petrina Arnason [mailto:parnason@tol.ca]
Sent: Wednesday, August 24, 2016 04:17 PM Eastern Standard Time
To: Engelsjord, Michael
Subject: Voicemail messages...

Dear Mr. Engelsford,
I am writing further to the voicemail message that I left this afternoon with respect to a development project that has recently been initiated at 2700 48th Ave. in the Gloucester Estates area in Langley Township. I understand from Minister John Aldag's office that you are the contact person in charge of the file regarding DFO approval for activities on the site that would affect West Creek and its riparian area. Can you please confirm the status of the DFO's involvement in the application as construction has now begun on site and we are not aware of any site visit or arrangements with respect to the further condition of Council as referenced in Township correspondence to the DFO Triage department.
Sincerely,
Councillor Petrina Arnason
Township of Langley
(604) 427-2993

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From: Billard, Karen
Sent: August-24-16 3:52 PM
To: Rotinsky, Brenda
Subject: RE: Voicemail messages...
Attachments: Beedie Group EV Logistics DP.PDF

It was the same report we already had (attached).

-----Original Message-----
From: Rotinsky, Brenda
Sent: 2016–August-24 3:46 PM
To: Engelsjord, Michael; Billard, Karen
Subject: Re: Voicemail messages...

Sure. Did you ever receive the package the city sent?

----- Original Message -----
From: Engelsjord, Michael
Sent: Wednesday, August 24, 2016 03:31 PM
To: Billard, Karen; Rotinsky, Brenda
Subject: Fw: Voicemail messages...

Probably best if one of you follow up.

----- Original Message -----
From: Petrina Arnason [mailto:parnason@tol.ca]
Sent: Wednesday, August 24, 2016 04:17 PM Eastern Standard Time
To: Engelsjord, Michael
Subject: Voicemail messages...

Dear Mr. Engelsford,
I am writing further to the voicemail message that I left this afternoon with respect to a development project that has recently been initiated at 2700 48th Ave. in the Gloucester Estates area in Langley Township. I understand from Minister John Aldag's office that you are the contact person in charge of the file regarding DFO approval for activities on the site that would affect West Creek and its riparian area. Can you please confirm the status of the DFO's involvement in the application as construction has now begun on site and we are not aware of any site visit or arrangements with respect to the further condition of Council as referenced in Township correspondence to the DFO Triage department.
Sincerely,
Councillor Petrina Arnason
Township of Langley
(604) 427-2993

Pages 491 to / à 521

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pages 425 to / à 455

Pages 522 to / à 533

are under consultation

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From: Engelsjord, Michael
Sent: August-25-16 8:48 AM
To: Rotinsky, Brenda; Billard, Karen
Subject: FW: West Creek - DFO contact information

Also received this one.

From: Petrina Arnason [mailto:parnason@tol.ca]
Sent: 2016–August-24 1:38 PM
To: Engelsjord, Michael
Subject: Fwd: West Creek - DFO contact information

Sent further to my email and voicemail message.

Councillor Petrina Arnason
Township of Langley

Begin forwarded message:

> **From:** <John.Aldag.C1@parl.gc.ca>
> **Date:** August 24, 2016 at 11:06:58 AM PDT
> **To:** <parnason@tol.ca>
> **Subject: West Creek - DFO contact information**
>
> Good morning Councillor Arnason,
>
> I spoke with Mr. Aldag this morning and he has asked me to provide you with his DFO contact that he has made aware of the West Creek situation.
>
> He's asked if you could get an update and report back to let us know what is happening.
>
> Michael Engelsjord, B.Sc., R.P.Bio.
> Team Leader, Fisheries Protection Program / Ecosystem Management Branch
> Fisheries and Oceans Canada / Government of Canada
> Michael.Engelsjord@dfo-mpo.gc.ca / Tel. : 604-666-2365
>
> Thanks so much,
>
> [redacted]
>
> [redacted]
> Office of John Aldag,MP
> Cloverdale-Langley City
> 105-19211 Fraser Highway
> Surrey, BC V3S 2C9

Document Released Under the Access to Information Act / Document divulgué en vertu de la Loi sur l'accès à l'information.

Phone: 604-575-6595
Cellular: [redacted]
Email: john.aldag.c1@parl.gc.ca
Website: www.johnaldagmp.ca

s.19(1)

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From: Billard, Karen
Sent: August-25-16 4:26 PM
To: Rotinsky, Brenda
Subject: RE: Gloucester Industrial Estates

s.19(1)

Oh great thanks.

From: Rotinsky, Brenda
Sent: 2016–August-25 4:24 PM
To: Billard, Karen
Subject: Re: Gloucester Industrial Estates

All good. I talked to [redacted] for 20 min. I'll meet him in the morning. I [redacted] will get the docs and pop into the site.

From: Billard, Karen
Sent: Thursday, August 25, 2016 04:22 PM
To: Rotinsky, Brenda
Subject: RE: Gloucester Industrial Estates

Brenda,
[redacted] I will deal with this on Monday. I will put in a call to the consultant and monitor for a reply tomorrow.
-Karen.

From: Rotinsky, Brenda
Sent: 2016–August-25 3:08 PM
To: Billard, Karen
Subject: Gloucester Industrial Estates

Can you please schedule a site visit on this one ASAP? If you don't have resources, Mike said someone from Triage could go. I know we are waiting on getting info from envirowest but can we stop at Lower Fraser and dig through the box for the hard file? Or maybe call someone else at envirowest? Fady could probably help locate the box.

Anyway, let's chat when you get a chance.

Brenda

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From: Rotinsky, Brenda
Sent: August-25-16 4:14 PM
To: Engelsjord, Michael
Subject: Re: West Creek

I just talked to envirowest for 20 min. The same guy that's worked on this file for 20 years is going to meet me in the morning. Plus he's going to start printing some info for me. [redacted]

All sounds legit so far s.19(1)

----- Original Message -----
From: Engelsjord, Michael
Sent: Thursday, August 25, 2016 03:52 PM
To: Rotinsky, Brenda
Cc: Thom, Michael
Subject: RE: West Creek

I like your plan.

-----Original Message-----
From: Rotinsky, Brenda
Sent: 2016–August-25 3:51 PM
To: Engelsjord, Michael
Cc: Thom, Michael
Subject: West Creek

I'm just going to deal with this quickly as we discussed. Micheal [redacted] has time to come with me (since you offered some triage support). We will go in the morning and make a stop at the envirowest office. They are in POCO.

See you early afternoon. Shouldn't take long.

Brenda

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From: Poirier, Julie
Sent: August-26-16 5:34 PM
To: Rotinsky, Brenda
Subject: Re: URGENT INFORMAL - TIME SENSITIVE: Fisheries Issue

Thanks Brenda I will check in with Minister's Office on this.
Julie
Julie Poirier
EA to the RDG

From: Rotinsky, Brenda
Sent: Friday, August 26, 2016 06:19 PM Eastern Standard Time
To: Poirier, Julie
Subject: FW: URGENT INFORMAL - TIME SENSITIVE: Fisheries Issue

Hi Julie,

I'm not sure if you were monitoring Sharan's email but this one probably cannot wait until her return to get back up the line.

Thank you!

From: Rotinsky, Brenda
Sent: 2016–August-26 3:16 PM
To: Johal, Sharan
Cc: Engelsjord, Michael; Fanos, Brad
Subject: RE: URGENT INFORMAL - TIME SENSITIVE: Fisheries Issue

Hi,

This is an update on the works occurring in reference to the original email by MP Aldag below at or near West Creek.

- The Township of Langley issued a Development Permit for works at the 27200 block of 48 Avenue in Langley, BC, known as the Truck Parking Facility in Gloucester Industrial Estates.
- The Township of Langley advised DFO of the Development Permit application and requested that DFO "ensures that the Development Application complies with all applicable Federal Government statues and regulations".
- DFO's regulatory program, the Fisheries Protection Program (FPP), is specifically responsible for reviewing projects for which a s.35(2) *Fisheries Act* Authorization or permit under the *Species at Risk Act* is required. DFO has not received an Application for Authorization for the works at the Truck Parking Facility to cause serious harm to fish.
- Pacific Region FPP does not typically receive and review project referrals from third parties, including provincial or municipal governments as there are no regulatory partnerships established in this regard. DFO also does not have the capacity (or mandate) to *ensure* that a Proponent comply with "all Federal Government statutes and regulations".
- Given the high level of interest in the works at the Truck Parking Facility, DFO's FPP staff conducted a site inspection to determine whether there was any compliance issue with the *Fisheries Act*.
- Development at Gloucester Industrial Estates dates back 20+ years and DFO was heavily involved in the early stages of the development, particularly around recommending riparian setbacks and Authorizing the habitat alteration and destruction of numerous watercourses. These works spanned 13 years. Habitat Compensation

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and monitoring was completed. There are no outstanding obligations associated with the Gloucester Authorization and DFO has closed this file.

- We understand that the proposed works at the Truck Parking Facility are set back from West Creek and its riparian and do not affect previously Authorized or riparian setback areas aside from the need to remove 5 danger trees.
- Upon review of the information provided to DFO regarding the proposed works at the Truck Parking Facility and the historic works at this site, and upon conducting a site inspection to view the works that are currently underway, FPP has determined that there is unlikely to be any works, undertakings or activities that will cause serious harm to fish or the need for a *Fisheries Act* Authorization for the works to proceed as planned. The site inspection did not reveal any compliance issues with s. 35 *Fisheries Act*.

A couple of pictures are attached from the site visit this morning. Let me know if you require anything further. I will be following up directly with the Township of Langley regarding their request.

Regards,

Brenda Rotinsky

Acting Team Leader, Fisheries Protection Program
Fisheries and Oceans Canada/Government of Canada
Brenda.Rotinsky@dfo-mpo.gc.ca/Tel: 604-666-1349

Chargé d'équipe Intérimaire, La protection des pêches Progamme
Pêches et Océans Canada/Gouvernement du Canada
Brenda.Rotinsky@dfo-mpo.gc.ca/Tél: 604-666-1349

From: Rotinsky, Brenda
Sent: 2016–August-11 1:07 PM
To: Johal, Sharan
Cc: Engelsjord, Michael
Subject: RE: URGENT INFORMAL - TIME SENSITIVE: Fisheries Issue

Yes, of course we are looking into it. We are waiting on information from the City of Langley on the proposed works which should be here by the end of the week or early next week (MP Aldag passed on this information to us). We should be able to cross reference with our files then. The file is complex but we should be able to have more information on this one within the week. We discussed things at length with MP Aldag but it is complex because of the time lag between the Authorization and the completion of work (16 years). My hunch is that we did Authorize the works but there was a phased approach and they are only completing the works now.

We will update you when we have further information.

Brenda Rotinsky

Acting Team Leader, Fisheries Protection Program
Fisheries and Oceans Canada/Government of Canada
Brenda.Rotinsky@dfo-mpo.gc.ca/Tel: 604-666-1349

Chargé d'équipe Intérimaire, La protection des pêches Progamme
Pêches et Océans Canada/Gouvernement du Canada
Brenda.Rotinsky@dfo-mpo.gc.ca/Tél: 604-666-1349

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From: Johal, Sharan
Sent: 2016–August-11 12:23 PM
To: Engelsjord, Michael; Rotinsky, Brenda
Subject: FW: URGENT INFORMAL - TIME SENSITIVE: Fisheries Issue

Hi Mike and Brenda,

Please see Mark's question below.

Thank you,
Catherine

Catherine Dickie
for
Sharan Johal
Team Leader | Chef d'équipe
Executive Secretariat | Secrétariat Exécutif
Regional Director General's Office | Bureau du Directrice Général Regional
Fisheries and Oceans Canada | Pêches et Océans Canada
Suite 200 - 401 Burrard Street | 401, rue Burrard, Pièce 200
Vancouver, BC V6C 3S4 | Vancouver, (C.-B.) V6C 3S4
Telephone/Téléphone: (604) 666-7102 | Fax/Télécopier: (604) 666-8956
Email/Courriel: Sharan.Johal@dfo-mpo.gc.ca

From: Waddell, Mark
Sent: August-11-16 12:20 PM
To: Johal, Sharan
Cc: Richter, Julie; Butcher, Ashley; Hopkins, Lillian; Martel, Robyne; Patrick, Lindsey
Subject: RE: URGENT INFORMAL - TIME SENSITIVE: Fisheries Issue

Yes, can we please attempt to validate this (i.e., we don't seem to be sure that this work is related to that authorized in 2000)? Considerable concern on this one...

From: Johal, Sharan
Sent: August 11, 2016 3:16 PM
To: Waddell, Mark <Mark.Waddell@dfo-mpo.gc.ca>
Cc: Richter, Julie <Julie.Richter@dfo-mpo.gc.ca>; Butcher, Ashley <Ashley.Butcher@dfo-mpo.gc.ca>; Hopkins, Lillian <Lillian.Hopkins@dfo-mpo.gc.ca>; Martel, Robyne <Robyne.Martel@dfo-mpo.gc.ca>; Patrick, Lindsey <Lindsey.Patrick@dfo-mpo.gc.ca>
Subject: RE: URGENT INFORMAL - TIME SENSITIVE: Fisheries Issue

Hi Mark,

Michael Engelsjord and Brenda Rotinsky provided the following.

"Brenda and I spoke with MP Aldag.

DFO issued an authorization in 2000 for works at the location in question. The current work may be related to completion of this work. The Township of Langley may be referring something to DFO shortly and we will be looking at this when we receive it."

Do you require any additional information?

Thanks,

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Catherine
Catherine Dickie
for
Sharan Johal
Team Leader | Chef d'équipe
Executive Secretariat | Secrétariat Exécutif
Regional Director General's Office | Bureau du Directrice Général Regional
Fisheries and Oceans Canada | Pêches et Océans Canada
Suite 200 - 401 Burrard Street | 401, rue Burrard, Pièce 200
Vancouver, BC V6C 3S4 | Vancouver, (C.-B.) V6C 3S4
Telephone/Téléphone: (604) 666-7102 | Fax/Télécopier: (604) 666-8956
Email/Courriel: Sharan.Johal@dfo-mpo.gc.ca

From: Waddell, Mark
Sent: August-11-16 8:11 AM
To: Johal, Sharan
Cc: Richter, Julie; Butcher, Ashley; Hopkins, Lillian; Martel, Robyne; Patrick, Lindsey
Subject: URGENT INFORMAL - TIME SENSITIVE: Fisheries Issue
Importance: High

Good Morning,

Could the region please follow up with MP Aldag in regards to this matter ASAP and provide a report back to MINO – please include info on whether or not authorizations were issued for this as well.

Thanks,
M

From: Aldag, John - Personal [mailto:John.Aldag.P9@parl.gc.ca]
Sent: August 9, 2016 8:39 PM
To: Min@dfo-mpo.gc.ca
Subject: A Fisheries Issue

Minister LeBlanc (Dominic): Welcome back to the West Coast. Sorry that I couldn't join you at the volunteer event last evening or any of your good-news announcements yesterday and today but constituency work dominates my calendar this week.

I'm contacting you about a fisheries issue in the riding adjacent to mine. The adjacent riding is Langley – Aldergrove and is held by Mark Warawa, Conservative MP. A local environmental group contacted me last week while Mark was out of the country to express concern about development that is planned in the Township of Langley that could have significant impacts on a salmon-bearing stream that feeds into the Fraser River. The Township of Langley recently approved a development permit for a truck storage area and alteration of existing detention ponds to collect and slowly release water from this development adjacent to existing industrial lands that border West Creek. West Creek was previously designated both federally and provincially as a sensitive stream, which should provide the highest standards guiding development adjacent to these streams. I've so far been unable to confirm whether West Creek retains this designation or if it lost the designation due to changes made by the previous government to CEAA and the Fisheries Act. There might also be a restrictive covenant on the lands being developed but I haven't yet been able to confirm if that is the case.

Today I received a call that equipment was being mobilized to the area, to begin work on lands to be developed and adjacent detention ponds. A concerned municipal councilor called to enquire if I could contact Fisheries and Oceans staff to confirm whether they received an application to review this work and to find out what level of awareness and involvement they have had on this file. I called every number listed online for Fisheries on the West Coast but received voicemail on all but one. I left messages but noted the service standard seems to be 2 days for the return of any calls. I

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spoke with one DFO employee at the Observe, Record and Report line but was told that she could not do anything if habitat destruction wasn't happening, and if it was, could only pass the concern along to DFO.

I'm hoping to speak with a representative from your department to determine if DFO is aware of this development issue adjacent to West Creek and if they have reviewed the application or issued any direction for work in and around West Creek. It will be extremely unfortunate if a salmon-bearing stream and its headwaters are impacted or destroyed within a few hours of your press conference noting that our government is working to protect the Fraser River salmon stocks.

I'm attaching a bit of the background information that I was given at the meeting last week and would appreciate it if you could forward this to your West Coast office and have them give me a call to discuss this file. I'm hoping DFO is on top of this file but would like to confirm that is the case. Note that Mark Warawa is also aware of this file and will likely monitor our government's response to this issue.

Any assistance you can provide in getting me in touch with your department would be appreciated. My constituency office number is 604-575-6595 and my personal cell is [redacted] should anyone be available to call me in the next day or two.

Thanks.

s.19(1)

John Aldag
Cloverdale – Langley City

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From: Rotinsky, Brenda
Sent: August-26-16 3:16 PM
To: Johal, Sharan
Cc: Engelsjord, Michael; Fanos, Brad
Subject: RE: URGENT INFORMAL - TIME SENSITIVE: Fisheries Issue
Attachments: IMG_4042.JPG; IMG_4043.JPG

Hi,

This is an update on the works occurring in reference to the original email by MP Aldag below at or near West Creek.

- The Township of Langley issued a Development Permit for works at the 27200 block of 48 Avenue in Langley, BC, known as the Truck Parking Facility in Gloucester Industrial Estates.
- The Township of Langley advised DFO of the Development Permit application and requested that DFO "ensures that the Development Application complies with all applicable Federal Government statues and regulations".
- DFO's regulatory program, the Fisheries Protection Program (FPP), is specifically responsible for reviewing projects for which a s.35(2) *Fisheries Act* Authorization or permit under the *Species at Risk Act* is required. DFO has not received an Application for Authorization for the works at the Truck Parking Facility to cause serious harm to fish.
- Pacific Region FPP does not typically receive and review project referrals from third parties, including provincial or municipal governments as there are no regulatory partnerships established in this regard. DFO also does not have the capacity (or mandate) to *ensure* that a Proponent comply with "all Federal Government statutes and regulations".
- Given the high level of interest in the works at the Truck Parking Facility, DFO's FPP staff conducted a site inspection to determine whether there was any compliance issue with the *Fisheries Act*.
- Development at Gloucester Industrial Estates dates back 20+ years and DFO was heavily involved in the early stages of the development, particularly around recommending riparian setbacks and Authorizing the habitat alteration and destruction of numerous watercourses. These works spanned 13 years. Habitat Compensation and monitoring was completed. There are no outstanding obligations associated with the Gloucester Authorization and DFO has closed this file.
- We understand that the proposed works at the Truck Parking Facility are set back from West Creek and its riparian and do not affect previously Authorized or riparian setback areas aside from the need to remove 5 danger trees.
- Upon review of the information provided to DFO regarding the proposed works at the Truck Parking Facility and the historic works at this site, and upon conducting a site inspection to view the works that are currently underway, FPP has determined that there is unlikely to be any works, undertakings or activities that will cause serious harm to fish or the need for a *Fisheries Act* Authorization for the works to proceed as planned. The site inspection did not reveal any compliance issues with s. 35 *Fisheries Act*.

A couple of pictures are attached from the site visit this morning. Let me know if you require anything further. I will be following up directly with the Township of Langley regarding their request.

Regards,

Brenda Rotinsky

Acting Team Leader, Fisheries Protection Program
Fisheries and Oceans Canada/Government of Canada
Brenda.Rotinsky@dfo-mpo.gc.ca/Tel: 604-666-1349

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Chargé d'équipe Intérimaire, La protection des pêches Progamme
Pêches et Océans Canada/Gouvernement du Canada
Brenda.Rotinsky@dfo-mpo.gc.ca/Tél: 604-666-1349

From: Rotinsky, Brenda
Sent: 2016–August-11 1:07 PM
To: Johal, Sharan
Cc: Engelsjord, Michael
Subject: RE: URGENT INFORMAL - TIME SENSITIVE: Fisheries Issue

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We will update you when we have further information.

Brenda Rotinsky

Acting Team Leader, Fisheries Protection Program
Fisheries and Oceans Canada/Government of Canada
Brenda.Rotinsky@dfo-mpo.gc.ca/Tel: 604-666-1349

Chargé d'équipe Intérimaire, La protection des pêches Progamme
Pêches et Océans Canada/Gouvernement du Canada
Brenda.Rotinsky@dfo-mpo.gc.ca/Tél: 604-666-1349

From: Johal, Sharan
Sent: 2016–August-11 12:23 PM
To: Engelsjord, Michael; Rotinsky, Brenda
Subject: FW: URGENT INFORMAL - TIME SENSITIVE: Fisheries Issue

Hi Mike and Brenda,

Please see Mark's question below.

Thank you,
Catherine

Catherine Dickie
for
Sharan Johal
Team Leader | Chef d'équipe
Executive Secretariat | Secrétariat Exécutif
Regional Director General's Office | Bureau du Directrice Général Regional
Fisheries and Oceans Canada | Pêches et Océans Canada
Suite 200 - 401 Burrard Street | 401, rue Burrard, Pièce 200
Vancouver, BC V6C 3S4 | Vancouver, (C.-B.) V6C 3S4
Telephone/Téléphone: (604) 666-7102 | Fax/Télécopier: (604) 666-8956
Email/Courriel: Sharan.Johal@dfo-mpo.gc.ca

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From: Waddell, Mark
Sent: August-11-16 12:20 PM
To: Johal, Sharan
Cc: Richter, Julie; Butcher, Ashley; Hopkins, Lillian; Martel, Robyne; Patrick, Lindsey
Subject: RE: URGENT INFORMAL - TIME SENSITIVE: Fisheries Issue

Yes, can we please attempt to validate this (i.e., we don't seem to be sure that this work is related to that authorized in 2000)? Considerable concern on this one...

From: Johal, Sharan
Sent: August 11, 2016 3:16 PM
To: Waddell, Mark <Mark.Waddell@dfo-mpo.gc.ca>
Cc: Richter, Julie <Julie.Richter@dfo-mpo.gc.ca>; Butcher, Ashley <Ashley.Butcher@dfo-mpo.gc.ca>; Hopkins, Lillian <Lillian.Hopkins@dfo-mpo.gc.ca>; Martel, Robyne <Robyne.Martel@dfo-mpo.gc.ca>; Patrick, Lindsey <Lindsey.Patrick@dfo-mpo.gc.ca>
Subject: RE: URGENT INFORMAL - TIME SENSITIVE: Fisheries Issue

Hi Mark,

Michael Engelsjord and Brenda Rotinsky provided the following.

"Brenda and I spoke with MP Aldag.

DFO issued an authorization in 2000 for works at the location in question. The current work may be related to completion of this work. The Township of Langley may be referring something to DFO shortly and we will be looking at this when we receive it."

Do you require any additional information?

Thanks,
Catherine

Catherine Dickie
for
Sharan Johal
Team Leader | Chef d'équipe
Executive Secretariat | Secrétariat Exécutif
Regional Director General's Office | Bureau du Directrice Général Regional
Fisheries and Oceans Canada | Pêches et Océans Canada
Suite 200 - 401 Burrard Street | 401, rue Burrard, Pièce 200
Vancouver, BC V6C 3S4 | Vancouver, (C.-B.) V6C 3S4
Telephone/Téléphone: (604) 666-7102 | Fax/Télécopier: (604) 666-8956
Email/Courriel: Sharan.Johal@dfo-mpo.gc.ca

From: Waddell, Mark
Sent: August-11-16 8:11 AM
To: Johal, Sharan
Cc: Richter, Julie; Butcher, Ashley; Hopkins, Lillian; Martel, Robyne; Patrick, Lindsey
Subject: URGENT INFORMAL - TIME SENSITIVE: Fisheries Issue
Importance: High

Good Morning,

Could the region please follow up with MP Aldag in regards to this matter ASAP and provide a report back to MINO – please include info on whether or not authorizations were issued for this as well.

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Thanks,
M

From: Aldag, John - Personal [mailto:John.Aldag.P9@parl.gc.ca]
Sent: August 9, 2016 8:39 PM
To: Min@dfo-mpo.gc.ca
Subject: A Fisheries Issue

Minister LeBlanc (Dominic): Welcome back to the West Coast. Sorry that I couldn't join you at the volunteer event last evening or any of your good-news announcements yesterday and today but constituency work dominates my calendar this week.

I'm contacting you about a fisheries issue in the riding adjacent to mine. The adjacent riding is Langley – Aldergrove and is held by Mark Warawa, Conservative MP. A local environmental group contacted me last week while Mark was out of the country to express concern about development that is planned in the Township of Langley that could have significant impacts on a salmon-bearing stream that feeds into the Fraser River. The Township of Langley recently approved a development permit for a truck storage area and alteration of existing detention ponds to collect and slowly release water from this development adjacent to existing industrial lands that border West Creek. West Creek was previously designated both federally and provincially as a sensitive stream, which should provide the highest standards guiding development adjacent to these streams. I've so far been unable to confirm whether West Creek retains this designation or if it lost the designation due to changes made by the previous government to CEAA and the Fisheries Act. There might also be a restrictive covenant on the lands being developed but I haven't yet been able to confirm if that is the case.

Today I received a call that equipment was being mobilized to the area, to begin work on lands to be developed and adjacent detention ponds. A concerned municipal councilor called to enquire if I could contact Fisheries and Oceans staff to confirm whether they received an application to review this work and to find out what level of awareness and involvement they have had on this file. I called every number listed online for Fisheries on the West Coast but received voicemail on all but one. I left messages but noted the service standard seems to be 2 days for the return of any calls. I spoke with one DFO employee at the Observe, Record and Report line but was told that she could not do anything if habitat destruction wasn't happening, and if it was, could only pass the concern along to DFO.

I'm hoping to speak with a representative from your department to determine if DFO is aware of this development issue adjacent to West Creek and if they have reviewed the application or issued any direction for work in and around West Creek. It will be extremely unfortunate if a salmon-bearing stream and its headwaters are impacted or destroyed within a few hours of your press conference noting that our government is working to protect the Fraser River salmon stocks.

I'm attaching a bit of the background information that I was given at the meeting last week and would appreciate it if you could forward this to your West Coast office and have them give me a call to discuss this file. I'm hoping DFO is on top of this file but would like to confirm that is the case. Note that Mark Warawa is also aware of this file and will likely monitor our government's response to this issue.

Any assistance you can provide in getting me in touch with your department would be appreciated. My constituency office number is 604-575-6595 and my personal cell is [redacted] should anyone be available to call me in the next day or two.

Thanks.

John Aldag
Cloverdale – Langley City

s.19(1)

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From: Rotinsky, Brenda
Sent: August-26-16 3:58 PM
To: 'parnason@tol.ca'
Cc: Fanos, Brad
Subject: Truck Parking Facility - Gloucester Inustrial Estates
Attachments: DSCF7465.jpg; DSCF7470.jpg; IMG_4042.JPG; IMG_4040.JPG

Hello Councillor Arnason,

As a follow-up to our conversation yesterday regarding the works at the Truck Parking Facility in Gloucester Industrial Estates I attended the site this morning with another DFO Fisheries Biologist. I am a Senior Biologist with DFO so between the two of us, we conducted a thorough site inspection to determine whether there were any compliance issues with the *Fisheries Act*.

We saw the following:

- Erosion and sediment control was in place and was effective. Some further fencing was being installed while we were there along the riparian boundary at the north end of the site.
- Water at West Creek was somewhat flooded and stagnant at this particular area due to beaver activity (as we understand from the environmental consultants). Water quality was poor due to this stagnation (low dissolved oxygen at <2mg and high temperatures reaching 24 degrees at the edge of the water and 19 degrees where the water was about a foot deep – as reported by the consultant today). We understand that stickleback were captured from the portion of the flooded area that was infilled but no salmonids were captured.
- Signage was in place at the riparian boundary.
- Site clearing had begun and was outside of the fenced off areas.
- An excavator was working at the site to complete the infill of a small flooded area.
- An environmental monitor from envirowest consultants was onsite.

We understand that:

- The riparian boundary was surveyed to ensure it was in the correct location.
- Works will occur outside of the surveyed riparian boundary to complete the Truck Parking Facility.
- Works will take 4-5 months to complete.
- Works are being overseen by envirowest consultants.

Based on the information we reviewed and what we saw at the site, we have determined that there are currently no compliance issues with the *Fisheries Act*. In addition, the proposed works to construct the truck parking facility does not interfere with any previously Authorized works. Please see some pictures of the site attached. I have cc'd my Manager on this email as it is unusual practice for DFO to review a project that has not been brought to us by the proponent unless there were reports of Serious Harm occurring (as I mentioned yesterday on the phone).

Regards,

Brenda Rotinsky

Acting Team Leader, Fisheries Protection Program
Fisheries and Oceans Canada/Government of Canada
Brenda.Rotinsky@dfo-mpo.gc.ca/Tel: 604-666-1349

Chargé d'équipe Intérimaire, La protection des pêches Progamme
Pêches et Océans Canada/Gouvernement du Canada

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Brenda.Rotinsky@dfo-mpo.gc.ca/Tél: 604-666-1349

No information has been removed or severed from this page

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Document Released Under the Access to Information Act / Document divulgué en vertu de la Loi sur l'accès à l'information.

From: Petrina Arnason <parnason@tol.ca>
Sent: August-29-16 10:27 AM
To: Rotinsky, Brenda
Cc: Fanos, Brad
Subject: Re: Truck Parking Facility - Gloucester Inustrial Estates

Dear Brenda,
I am writing to thank you very much for following up on this extraordinary request with a site visit to the Gloucester Estates and truck parking facility property development. I, and the other stakeholders, are consequently reassured that the site activities meet DFO regulations with respect to West Creek and its riparian area. Once again, I would like to acknowledge the flexibility and discretion exercised in this instance and take this occasion to laud all of the important work that you in the DFO are tasked with in order to protect and enhance our valuable aquatic environments and ecosystems.
Sincerely,
Councillor Petrina Arnason
Township of Langley

On Aug 26, 2016, at 3:58 PM, Rotinsky, Brenda <Brenda.Rotinsky@dfo-mpo.gc.ca> wrote:

> Hello Councillor Arnason,
>
> As a follow-up to our conversation yesterday regarding the works at the Truck Parking Facility in Gloucester Industrial Estates I attended the site this morning with another DFO Fisheries Biologist. I am a Senior Biologist with DFO so between the two of us, we conducted a thorough site inspection to determine whether there were any compliance issues with the *Fisheries Act*.
>
> We saw the following:
> - Erosion and sediment control was in place and was effective. Some further fencing was being installed while we were there along the riparian boundary at the north end of the site.
> - Water at West Creek was somewhat flooded and stagnant at this particular area due to beaver activity (as we understand from the environmental consultants). Water quality was poor due to this stagnation (low dissolved oxygen at <2mg and high temperatures reaching 24 degrees at the edge of the water and 19 degrees where the water was about a foot deep – as reported by the consultant today). We understand that stickleback were captured from the portion of the flooded area that was infilled but no salmonids were captured.
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> We understand that:
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Based on the information we reviewed and what we saw at the site, we have determined that there are currently no compliance issues with the *Fisheries Act*. In addition, the proposed works to construct the truck parking facility does not interfere with any previously Authorized works. Please see some pictures of the site attached. I have cc'd my Manager on this email as it is unusual practice for DFO to review a project that has not been brought to us by the proponent unless there were reports of Serious Harm occurring (as I mentioned yesterday on the phone).

Regards,

Brenda Rotinsky

Acting Team Leader, Fisheries Protection Program
Fisheries and Oceans Canada/Government of Canada
Brenda.Rotinsky@dfo-mpo.gc.ca/Tel: 604-666-1349

Chargé d'équipe Intérimaire, La protection des pêches Progamme
Pêches et Océans Canada/Gouvernement du Canada
Brenda.Rotinsky@dfo-mpo.gc.ca/Tél: 604-666-1349

<DSCF7465.jpg>

<DSCF7470.jpg>

<IMG_4042.JPG>

<IMG_4040.JPG>

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From: Poirier, Julie
Sent: August-30-16 4:06 PM
To: Rotinsky, Brenda
Subject: RE: URGENT INFORMAL - TIME SENSITIVE: Fisheries Issue

Hi Brenda, [redacted] There is a lot of information here but I am not convinced we are responding to Mark's last question below in red. Thoughts before I send this up.
Thank you
Julie

s.19(1)

From: Rotinsky, Brenda
Sent: August 26, 2016 3:19 PM
To: Poirier, Julie
Subject: FW: URGENT INFORMAL - TIME SENSITIVE: Fisheries Issue

Hi Julie,

I'm not sure if you were monitoring Sharan's email but this one probably cannot wait until her return to get back up the line.

Thank you!

From: Rotinsky, Brenda
Sent: 2016–August-26 3:16 PM
To: Johal, Sharan
Cc: Engelsjord, Michael; Fanos, Brad
Subject: RE: URGENT INFORMAL - TIME SENSITIVE: Fisheries Issue

Hi,

This is an update on the works occurring in reference to the original email by MP Aldag below at or near West Creek.

- The Township of Langley issued a Development Permit for works at the 27200 block of 48 Avenue in Langley, BC, known as the Truck Parking Facility in Gloucester Industrial Estates.
- The Township of Langley advised DFO of the Development Permit application and requested that DFO "ensures that the Development Application complies with all applicable Federal Government statues and regulations".
- DFO's regulatory program, the Fisheries Protection Program (FPP), is specifically responsible for reviewing projects for which a s.35(2) *Fisheries Act* Authorization or permit under the *Species at Risk Act* is required. DFO has not received an Application for Authorization for the works at the Truck Parking Facility to cause serious harm to fish.
- Pacific Region FPP does not typically receive and review project referrals from third parties, including provincial or municipal governments as there are no regulatory partnerships established in this regard. DFO also does not have the capacity (or mandate) to *ensure* that a Proponent comply with "all Federal Government statutes and regulations".
- Given the high level of interest in the works at the Truck Parking Facility, DFO's FPP staff conducted a site inspection to determine whether there was any compliance issue with the *Fisheries Act*.
- Development at Gloucester Industrial Estates dates back 20+ years and DFO was heavily involved in the early stages of the development, particularly around recommending riparian setbacks and Authorizing the habitat alteration and destruction of numerous watercourses. These works spanned 13 years. Habitat Compensation

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and monitoring was completed. There are no outstanding obligations associated with the Gloucester Authorization and DFO has closed this file.

- We understand that the proposed works at the Truck Parking Facility are set back from West Creek and its riparian and do not affect previously Authorized or riparian setback areas aside from the need to remove 5 danger trees.
- Upon review of the information provided to DFO regarding the proposed works at the Truck Parking Facility and the historic works at this site, and upon conducting a site inspection to view the works that are currently underway, FPP has determined that there is unlikely to be any works, undertakings or activities that will cause serious harm to fish or the need for a *Fisheries Act* Authorization for the works to proceed as planned. The site inspection did not reveal any compliance issues with s. 35 *Fisheries Act*.

A couple of pictures are attached from the site visit this morning. Let me know if you require anything further. I will be following up directly with the Township of Langley regarding their request.

Regards,

Brenda Rotinsky

Acting Team Leader, Fisheries Protection Program
Fisheries and Oceans Canada/Government of Canada
Brenda.Rotinsky@dfo-mpo.gc.ca/Tel: 604-666-1349

Chargé d'équipe Intérimaire, La protection des pêches Progamme
Pêches et Océans Canada/Gouvernement du Canada
Brenda.Rotinsky@dfo-mpo.gc.ca/Tél: 604-666-1349

From: Rotinsky, Brenda
Sent: 2016–August-11 1:07 PM
To: Johal, Sharan
Cc: Engelsjord, Michael
Subject: RE: URGENT INFORMAL - TIME SENSITIVE: Fisheries Issue

Yes, of course we are looking into it. We are waiting on information from the City of Langley on the proposed works which should be here by the end of the week or early next week (MP Aldag passed on this information to us). We should be able to cross reference with our files then. The file is complex but we should be able to have more information on this one within the week. We discussed things at length with MP Aldag but it is complex because of the time lag between the Authorization and the completion of work (16 years). My hunch is that we did Authorize the works but there was a phased approach and they are only completing the works now.

We will update you when we have further information.

Brenda Rotinsky

Acting Team Leader, Fisheries Protection Program
Fisheries and Oceans Canada/Government of Canada
Brenda.Rotinsky@dfo-mpo.gc.ca/Tel: 604-666-1349

Chargé d'équipe Intérimaire, La protection des pêches Progamme
Pêches et Océans Canada/Gouvernement du Canada
Brenda.Rotinsky@dfo-mpo.gc.ca/Tél: 604-666-1349

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From: Johal, Sharan
Sent: 2016–August-11 12:23 PM
To: Engelsjord, Michael; Rotinsky, Brenda
Subject: FW: URGENT INFORMAL - TIME SENSITIVE: Fisheries Issue

Hi Mike and Brenda,

Please see Mark's question below.

Thank you,
Catherine

Catherine Dickie
for
Sharan Johal
Team Leader | Chef d'équipe
Executive Secretariat | Secrétariat Exécutif
Regional Director General's Office | Bureau du Directrice Général Regional
Fisheries and Oceans Canada | Pêches et Océans Canada
Suite 200 - 401 Burrard Street | 401, rue Burrard, Pièce 200
Vancouver, BC V6C 3S4 | Vancouver, (C.-B.) V6C 3S4
Telephone/Téléphone: (604) 666-7102 | Fax/Télécopier: (604) 666-8956
Email/Courriel: Sharan.Johal@dfo-mpo.gc.ca

From: Waddell, Mark
Sent: August-11-16 12:20 PM
To: Johal, Sharan
Cc: Richter, Julie; Butcher, Ashley; Hopkins, Lillian; Martel, Robyne; Patrick, Lindsey
Subject: RE: URGENT INFORMAL - TIME SENSITIVE: Fisheries Issue

Yes, can we please attempt to validate this (i.e., we don't seem to be sure that this work is related to that authorized in 2000)? Considerable concern on this one...

From: Johal, Sharan
Sent: August 11, 2016 3:16 PM
To: Waddell, Mark <Mark.Waddell@dfo-mpo.gc.ca>
Cc: Richter, Julie <Julie.Richter@dfo-mpo.gc.ca>; Butcher, Ashley <Ashley.Butcher@dfo-mpo.gc.ca>; Hopkins, Lillian <Lillian.Hopkins@dfo-mpo.gc.ca>; Martel, Robyne <Robyne.Martel@dfo-mpo.gc.ca>; Patrick, Lindsey <Lindsey.Patrick@dfo-mpo.gc.ca>
Subject: RE: URGENT INFORMAL - TIME SENSITIVE: Fisheries Issue

Hi Mark,

Michael Engelsjord and Brenda Rotinsky provided the following.

"Brenda and I spoke with MP Aldag.

DFO issued an authorization in 2000 for works at the location in question. The current work may be related to completion of this work. The Township of Langley may be referring something to DFO shortly and we will be looking at this when we receive it."

Do you require any additional information?

Thanks,

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Catherine
Catherine Dickie
for
Sharan Johal
Team Leader | Chef d'équipe
Executive Secretariat | Secrétariat Exécutif
Regional Director General's Office | Bureau du Directrice Général Regional
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Telephone/Téléphone: (604) 666-7102 | Fax/Télécopier: (604) 666-8956
Email/Courriel: Sharan.Johal@dfo-mpo.gc.ca

From: Waddell, Mark
Sent: August-11-16 8:11 AM
To: Johal, Sharan
Cc: Richter, Julie; Butcher, Ashley; Hopkins, Lillian; Martel, Robyne; Patrick, Lindsey
Subject: URGENT INFORMAL - TIME SENSITIVE: Fisheries Issue
Importance: High

Good Morning,

Could the region please follow up with MP Aldag in regards to this matter ASAP and provide a report back to MINO – please include info on whether or not authorizations were issued for this as well.

Thanks,
M

From: Aldag, John - Personal [mailto:John.Aldag.P9@parl.gc.ca]
Sent: August 9, 2016 8:39 PM
To: Min@dfo-mpo.gc.ca
Subject: A Fisheries Issue

Minister LeBlanc (Dominic): Welcome back to the West Coast. Sorry that I couldn't join you at the volunteer event last evening or any of your good-news announcements yesterday and today but constituency work dominates my calendar this week.

I'm contacting you about a fisheries issue in the riding adjacent to mine. The adjacent riding is Langley – Aldergrove and is held by Mark Warawa, Conservative MP. A local environmental group contacted me last week while Mark was out of the country to express concern about development that is planned in the Township of Langley that could have significant impacts on a salmon-bearing stream that feeds into the Fraser River. The Township of Langley recently approved a development permit for a truck storage area and alteration of existing detention ponds to collect and slowly release water from this development adjacent to existing industrial lands that border West Creek. West Creek was previously designated both federally and provincially as a sensitive stream, which should provide the highest standards guiding development adjacent to these streams. I've so far been unable to confirm whether West Creek retains this designation or if it lost the designation due to changes made by the previous government to CEAA and the Fisheries Act. There might also be a restrictive covenant on the lands being developed but I haven't yet been able to confirm if that is the case.

Today I received a call that equipment was being mobilized to the area, to begin work on lands to be developed and adjacent detention ponds. A concerned municipal councilor called to enquire if I could contact Fisheries and Oceans staff to confirm whether they received an application to review this work and to find out what level of awareness and involvement they have had on this file. I called every number listed online for Fisheries on the West Coast but received voicemail on all but one. I left messages but noted the service standard seems to be 2 days for the return of any calls. I

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spoke with one DFO employee at the Observe, Record and Report line but was told that she could not do anything if habitat destruction wasn't happening, and if it was, could only pass the concern along to DFO.

I'm hoping to speak with a representative from your department to determine if DFO is aware of this development issue adjacent to West Creek and if they have reviewed the application or issued any direction for work in and around West Creek. It will be extremely unfortunate if a salmon-bearing stream and its headwaters are impacted or destroyed within a few hours of your press conference noting that our government is working to protect the Fraser River salmon stocks.

I'm attaching a bit of the background information that I was given at the meeting last week and would appreciate it if you could forward this to your West Coast office and have them give me a call to discuss this file. I'm hoping DFO is on top of this file but would like to confirm that is the case. Note that Mark Warawa is also aware of this file and will likely monitor our government's response to this issue.

Any assistance you can provide in getting me in touch with your department would be appreciated. My constituency office number is 604-575-6595 and my personal cell is [redacted] should anyone be available to call me in the next day or two.

Thanks.

s.19(1)

John Aldag
Cloverdale – Langley City

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From: Billard, Karen
Sent: November-02-16 11:33 AM
To: Fanos, Brad
Cc: Rotinsky, Brenda; Engelsjord, Michael; Knoop, Donald
Subject: Goucester Estates

Brad,

I have prepared a specific response regarding the letter to the Minister, as well as, a fairly detailed account of all of the works/activities/occurrences associated with Gloucester Estates.

-Karen.

- All Authorized works to move, fill in, redirect streams were completed in 2008. All realignments, enhancements and compensation area were completed with the exception of the stormwater detention ponds due to be completed in 2017.
- DFO has confirmed that work at the truck staging site does not encroach on the riparian area which was clearly delineated on their development application. The only works proposed in this protected area is the removal of the tops of 5 trees. All remaining vegetation and aquatic fish habitat is to remain undisturbed.
- DFO has no reason to believe that unauthorized serious harm has occurred at the site.
- Beedie Group remains bound to ensure the compensatory habitat is functioning as intended for the lifetime of Gloucester Industrial Estates
- On July 17, 2016 a report of the killing of fish was received by DFO. This is not related to the development of the above property. Fish were killed due to poor practices of a contractor. As a result Beedie Group has put in place an internal policy for 'Works in And Around Natural Habitat'.

BACKGROUND:
Gloucester Estates, owned and operated by Beedie Development Group, is a 60 acre industrial business park located in Langley. Portions of a number of ponds and water courses were relocated and realigned to accommodate the development.

- DFO Authorization issued for works in May 2000 through September 2005.
- Stormwater designs throughout the property were required to follow Land Development Guidelines for the Protection of Aquatic Habitats.
- Original design included a golf course adjacent to the stormwater detention ponds. Due to lack of interest in the golf course the combined area was redesigned with the intended result to increase the fish habitat compensation area. The Authorization was amended to include this new design. Due to delays in construction, further amendments and notifications have extended the completion date to 2017.
- Offsetting (compensation) associated with the 2000 to 2008 development included aquatic habitat features to maintain and/or enhance fish habitat.
- Riparian leave strips were in the magnitude of between 15 and 30 metres.
- All fish habitat and associated riparian leavestrips remain as designated Streamside Protected Areas by Restrictive Covenant agreements and registered against the title of the propert(ies).
- Beedie Group remains bound to ensure the compensatory habitat is functioning as intended for the lifetime of Gloucester Industrial Estates.

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FISH KILL:
Occurrence report received by DFO, regarding the killing of fish.

- Fishery Officers met on site with Beedie Group representatives and their environmental consultant.
- A contractor was working on a flood control structure and was unaware of fish presence. Subsequently no fish screen was used and fish were taken into and through the pump and were killed.
- As a result of the incident, the Beedie Group developed an internal policy 'Works in And Around Natural Habitat' with a commitment to roll out by December.

TRUCK PARKING FACILITY:
Development of an unoccupied lot within Gloucester Estates

- In July the Township of Langley approved a development permit for a truck parking, trailer storage/staging facility.
- The Township of Langley forwarded their approval notice which included a reminder to the developer that they were advised to finalize their site specific on-site servicing and stormwater management plan in accordance with the Subdivision and Development Servicing Bylaws and their erosion and sediment control plan in accordance with Erosion and Sediment Control Bylaw.

s.19(1)

- Opposition to the development, [redacted] were reported by City of Langley Council members to DFO.
- Media coverage states salmon habitat was being put at risk.
- Fisheries Protection Biologist attended the site with a representative of the Beedie Group, their environmental consultant and the contractor developing the property.
- No watercourse or riparian encroachment was observed. Erosion and sediment control structures were in place.
- Site plans clearly delineate a portion of a tributary of West Creek and a riparian buffer that are identified as protected salmon habitat and Streamside Protected Area
- August 26, 2016 FPP Triage a Received for Review to reduce the height of 5 standing dead trees within the riparian area. They were informed "a *Fisheries Act* authorization is not required given that serious harm to fish can be avoided by following standard measures".

Karen Billard
Fisheries Protection Program / Programme de protection des pêches
Ecosystem Management Branch / Gestion des ecosystems
Fisheries and Oceans Canada / Pêches et Océans Canada
13th Floor 401 Burrard St., Vancouver, BC, V6C 3S4
Phone/ téléphone: 778-789-0522
E-mail/Courriel: karen.billard@dfo-mpo.gc.ca

-----Original Message-----
From: Fanos, Brad
Sent: 2016–November-01 2:01 PM
To: Billard, Karen
Subject: FW: MINO INFORMAL: Gloucester Estates

Karen
Please provide me a few bullets to respond to this request from MINO office. Please provide asap or by 12pm wed is fine if you need more follow up on the file.

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Thanks
Brad

Brad Fanos

Regulatory Reviews Manager, Fisheries Protection Program Ecosystem Management Branch Fisheries and Oceans Canada / Government of Canada brad.fanos@dfo-mpo.gc.ca / Tel: 604-666-3909 / Cell: [redacted]

Programme de la protection des pêches
Direction des ecosystems
Pêches et Océans Canada / Gouvernement du Canada brad.fanos@dfo-mpo.gc.ca / Tel: [redacted]

-----Original Message-----
From: Johal, Sharan
Sent: November-01-16 1:01 PM
To: Fanos, Brad
Cc: Mercier, Liliane
Subject: MINO INFORMAL: Gloucester Estates

s.16(2)
s.19(1)

Brad: Can MINO please obtain a response to this individual's concern about construction on West Creek after the expiration of DFO authorization? Please provide the information to me via email by noon Friday November 4th.

Thank you

Sharan Johal
Fisheries & Oceans Canada | Pêches et Océans Canada
(604) 666-7102

From: [redacted]
Sent: October 28, 2016 5:22 PM
To:
Subject: Gloucester Estates

Hi, Just a follow-up to the data I sent re the DFO authorization to move, fill in , redirect streams etc. There was a meeting with Beedie Group on Tuesday October 25 where it was confirmed that this authorization to "do harm" to the fish and habitat expired in 2015, so to the best of our knowledge all the work at the truck staging site was done with no current DFO standards being met, and no TOL stream side protection bylaws being observed. I find this really disturbing, considering that Beedie wrote to the Township, following the fish kill, claiming their commitment to the environment and their policy of operating to the highest possible standards. Have you had any success with anyone at DFO who could assure us that they are aware of the situation here and that there will be monitoring of future plans and development to ensure that current regulations are enforced? As always, anything you can do to help us in our endeavour to save West Creek and to protect the fish habitat will be greatly appreciated!
Kind regards, [redacted]

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From: Anderson, Laura
Sent: January-30-17 1:11 PM
To: Rotinsky, Brenda
Subject: FW: Township of Langley - West Coast Environmental Law
Attachments: [redacted] - Jan 26, 2017.pdf s.19(1)

Follow Up Flag: Follow up
Flag Status: Completed

Hi Brenda,

We've been cc'd on another letter from Norton Rose Fulbright Canada. It's attached for your information.

If you have any questions for me about this, please let me know.

Best,

Laura Anderson

Web Advisor – Digital Communications Team, Pacific Region
Fisheries and Oceans Canada/Government of Canada
Laura.Anderson@dfo-mpo.gc.ca /Tel: 604-666-0392

Agente des communications/web – équipe des communications numériques, Région du Pacifique
Pêches et Océans Canada/Gouvernement du Canada
Laura.Anderson@dfo-mpo.gc.ca / Tél. 604-666-0392

From: [redacted]
Sent: January-26-17 4:23 PM
To: [redacted]
Cc: PAC WEB (DFO/MPO)
Subject: Township of Langley - West Coast Environmental Law

Dear [redacted]

Please see the attached correspondence.

This e-mail is sent on behalf of [redacted]

Kind regards,

[redacted]

Norton Rose Fulbright Canada LLP / S.E.N.C.R.L., s.r.l.
1800 - 510 West Georgia Street, Vancouver, BC V6B 0M3 Canada
T: [redacted] | F: +1 604.641.4949
[redacted]

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NORTON ROSE FULBRIGHT

Law around the world
nortonrosefulbright.com

Bull Housser has combined with Norton Rose Fulbright effective January 1, 2017. Please update your records accordingly.

CONFIDENTIALITY NOTICE: This email is confidential and may be privileged. If you are not the intended recipient please notify the sender immediately and delete it.

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NORTON ROSE FULBRIGHT

Barristers & Solicitors / Patent & Trade-mark Agents

Norton Rose Fulbright Canada LLP
1800 - 510 West Georgia Street
Vancouver, BC V6B 0M3 CANADA

F: +1 604.641.4949
nortonrosefulbright.com

January 26, 2017

s.19(1) **Sent By E-mail** [redacted]

West Coast Environmental Law
200 - 2006 W 10th Ave
Vancouver, BC V6J 2B3

Attention: [redacted]

[redacted]

Our reference
17-2095

Dear Sirs/Mesdames:

The Corporation of the Township of Langley (the "Township") – WCEL Letter dated January 9, 2017 – 5052 - 272 Street, Langley (the "Property")

We are legal counsel for the Township. We are in receipt of your letter dated January 9, 2017, and have been instructed to respond to same. While the Township disagrees with much of what is contained in your recent letter, it is not necessary to engage in a point by point debate. Rather, we will focus on the Township's main position that there are no issues with the Property requiring Township involvement at this time. In this regard, we are advised as follows.

The authorization previously provided by the Department of Fisheries and Oceans ("DFO"), as referenced in your letter, contained certain requirements that had to be completed during the term of the authorization (i.e. before 2015) in order for future works to proceed on the Property. As provided for in the Township's Official Community Plan, the Property would be exempted from the streamside protection requirements contained in the OCP as a result of the DFO authorization. In particular, as long as the DFO's requirements were completed within the term of the DFO authorization, ongoing works at the Property would be exempted from the Township's other streamside requirements, including but not limited to, a streamside development permit. There was no requirement in the DFO authorization that the subject works be completed within the term of the DFO authorization.

The requirements of the DFO authorization were completed within the term of the authorization. For example, the DFO authorization required the registration of a restrictive covenant containing certain restrictions against title to the Property (the "Covenant"). For your information, the Covenant was designed to provide appropriate streamside protection for the Property comparable to the Riparian Areas Regulation referenced in your letter, but which was otherwise superseded by the DFO authorization. In this regard, the Covenant includes a condition that no development may occur within the Covenant area. As well, any clearing and/or excavation on the Property must not result in any release of silt, concrete, leachate or other deleterious substances into the Covenant area. Fencing of the Covenant area is also required. In short, the restrictions contained in the Covenant required by the DFO authorization ensure that the Property is used and maintained to a standard comparable to the requirements contained in the Riparian Areas Regulation.

We are further advised that the works currently being undertaken at the Property fully comply with the DFO authorization, including the terms contained in the Covenant. While the Township strongly supports streamside

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s.19(1) protection, it is not aware of any destruction or harmful alteration of fish habitat in West Creek or elsewhere on the Property. In relation to the Property, the Township is not aware of any breach of the DFO authorization, the Covenant, the Township's Official Community Plan, or the Riparian Areas Regulation Protection Act.

In light of the above, the Township does not intend to take any further action at this time in respect of the Property, except to ensure ongoing compliance with the applicable legal requirements, as set out above, including the Covenant. If you have any questions concerning the above, please contact the writer.

Yours very truly,

Copy to: Fisheries and Oceans Canada, Pacific Region (by e-mail: webmasterpacrhq@dfo-mpo.gc.ca)

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From: [redacted]
Sent: February-08-17 4:34 PM
To: Rotinsky, Brenda
Subject: RE: Thank you

s.19(1)

Follow Up Flag: Follow up
Flag Status: Completed

Hi Brenda,

I understand that you were to prepare a letter/memo regarding status of the works at Gloucester Estates in the context of the issued Authorization. Is that letter something you can share with us?

[redacted]

[redacted]
office: 604-944-0502 ext [redacted]
cellular: 604-240-2139
facsimile: 604-944-0507
Suite 101 - 1515 Broadway Street
Port Coquitlam, British Columbia
Canada V3C 6M2
envirowest consultants inc.
www.envirowest.ca

From: Rotinsky, Brenda [mailto:Brenda.Rotinsky@dfo-mpo.gc.ca]
Sent: Friday, August 26, 2016 1:52 PM
To: [redacted]
Cc: Thom, Michael
Subject: Thank you

Hi [redacted]

Thanks for meeting with us on such short notice this morning to discuss works in and around West Creek over the past 20 years and providing us with some maps and documents.

I just got your voice mail and will call you shortly. I just have a couple things to wrap up before I call.

Regards,

Brenda Rotinsky

Acting Team Leader, Fisheries Protection Program
Fisheries and Oceans Canada/Government of Canada
Brenda.Rotinsky@dfo-mpo.gc.ca/Tel: 604-666-1349

Chargé d'équipe Intérimaire, La protection des pêches Progamme
Pêches et Océans Canada/Gouvernement du Canada
Brenda.Rotinsky@dfo-mpo.gc.ca/Tél: 604-666-1349

Document Released Under the Access to Information Act / Document divulgué en vertu de la Loi sur l'accès à l'information.

From: McGuire-Funk, Bev
Sent: December-18-17 10:36 AM
To: Rotinsky, Brenda
Cc: Russo, Stephanie; Hussey, Darryl
Subject: RE: ORR 17-2405-hab-diversion of West Creek in Langley
Attachments: Gloucester (Township of Langley) Information

FYI

s.16(2)

Bev McGuire-Funk

Fishery Officer/Agente des peches

Fraser Valley West Langley Office/Division du Bas Fraser
Phone: (604) 607-4157

Cell phone [redacted]

From: Rotinsky, Brenda
Sent: Friday, December 15, 2017 1:43 PM
To: Demsky, Arthur; Fanos, Brad
Cc: Powers, Perry; McGuire-Funk, Bev; Russo, Stephanie; Hussey, Darryl
Subject: RE: ORR 17-2405-hab-diversion of West Creek in Langley

This has just entered our system today (ORR report came in this morning). The role of FPP is to lead the triage review of all occurrences and as part of that review, we will lead the determination of serious harm to fish. Part of what we do is look into whether we have issued advice related to the works. We will search our data base and call relevant parties. I see that C&P has initiated an information gather exercise on this one already but I ask that C&P coordinate with FPP at the operational level to avoid duplicating efforts by both FPP and C&P.

I appreciate your efforts, Art but please have Bev connect with Stephanie Russo (604-666 -7066) to avoid further duplication on the information gather stage of this occurrence report. Stephanie receives the ORR reports and initiates her review (and reaches out to the Fishery Officers when necessary). She also works with Don Knoop, who you have probably worked with in the past.

As an aside, DFO has a long history with the Beedie Group with their work in and near West Creek (at Gloucester Industrial Estates) as well as involvement with local MLA, the Township, environmental consultants, and even legal involvement. I have been the contact with the MLA in the past to address some concerns so if there is a need, I can reconnect with her on this one.

Thanks,
Brenda Rotinsky

Team Leader, Fisheries Protection Program
Fisheries and Oceans Canada/Government of Canada
Brenda.Rotinsky@dfo-mpo.gc.ca/Tel: 250-756-7075

Chef d'équipe, La protection des pêches Programme
Pêches et Océans Canada/Gouvernement du Canada
Brenda.Rotinsky@dfo-mpo.gc.ca/Tél: 250-756-7075

Document Released Under the Access to Information Act / Document divulgué en vertu de la Loi sur l'accès à l'information.

From: Demsky, Arthur
Sent: 2017–December-15 1:24 PM
To: Fanos, Brad
Cc: Powers, Perry; McGuire-Funk, Bev; Rotinsky, Brenda
Subject: RE: ORR 17-2405-hab-diversion of West Creek in Langley

Thanks Brad for getting right back to me.

I've had Bev contact the Langley Township to see if they can tell us what's going on from their side of things. No luck there yet apparently either. Waiting on call-backs.

art

From: Fanos, Brad
Sent: 2017–December-15 1:15 PM
To: Demsky, Arthur
Cc: Powers, Perry; McGuire-Funk, Bev; Rotinsky, Brenda
Subject: RE: ORR 17-2405-hab-diversion of West Creek in Langley
Importance: High

Hi Art
Thanks for flagging this. Brenda will get back to you on if we have had any reports and what if any work FPP is doing at present.

From: Demsky, Arthur
Sent: December-15-17 12:50 PM
To: Fanos, Brad
Cc: Powers, Perry; McGuire-Funk, Bev
Subject: FW: ORR 17-2405-hab-diversion of West Creek in Langley
Importance: High

s.19(1)
s.21(1)(b)

Hi Brad

We've been seeing a number of reports lately regarding this specific location. I've had complainants come into the office. I've been informed the local MLA is involved. I've had the local Enhancement Society contact me about it. I've contacted fish habitat consultant supposedly working on the site and have not had a call back. It's West Creek at 275 Street and 45th Ave. [redacted]

Did we/FPP provide the Township of Langley or the Developer (Beedie Group) with any approvals which would allow them to re-direct the creek through a pipe? I know there always was a pipe or culvert under Highway 1 adjacent to the property in question.

Are we missing some information here? Can you get back to me on this one please.

Thanks.

Art Demsky, Detachment Supervisor for Fraser Valley West
Fisheries and Oceans Canada
Conservation and Protection Branch

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5550-268 Street
Langley , British Columbia V4W 3X4
(604) 607-4168 (office-direct) or [redacted](cell)

s.16(2)

From: Bateson, Alayne
Sent: 2017–December-15 9:27 AM
To: FPP.PAC / PPP.PAC (DFO/MPO); Davis, Launi; Demsky, Arthur; Green, Sherri; McGuire-Funk, Bev; Powers, Perry; Reich, Alex; Taylor, Jonathan
Subject: ORR 17-2405-hab-diversion of West Creek in Langley

Document Released Under the Access to Information Act / Document divulgué en vertu de la Loi sur l'accès à l'information.

From: Rod Shead <rshead@tol.ca>
Sent: December-18-17 10:15 AM
To: McGuire-Funk, Bev
Subject: Gloucester (Township of Langley) Information
Attachments: 2017 12 04 Council Memo re Beedie incl Attachments.pdf

Bev,

As discussed, information regarding works at the Beedie property (275 Street & 48 Avenue) in the Gloucester area of the Township is attached. This was a memo that staff prepared for Mayor and Council in response to works at the site.

Call if you or other DFO staff require additional information.

Thanks.

Rod Shead, RPBio, PAg
Development Planning
Environmental Coordinator II
Township of Langley 20338-65 Avenue, Langley, BC V2Y 3J1
604.533.6090 ext. 3436 | rshead@tol.ca | www.tol.ca

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Township of Langley
Est. 1873

MEMORANDUM

TO:	MAYOR AND COUNCIL	**DATE:**	DECEMBER 4, 2017
FROM:	COMMUNITY DEVELOPMENT DIVISION	**FILE NO:**	14-05-0098
SUBJECT:	**DEVELOPMENT PERMIT APPLICATION NO. 100890 (161884 CANADA INC. / BEEDIE DEVELOPMENT / 4825 - 275 STREET)**		

The purpose of this memorandum is to provide Mayor and Council with information regarding Development Permit No. 100890 to permit the construction of a 9,835 m² (105,868 ft²) industrial building including accessory office space located at 4825 - 275 Street in Gloucester.

As noted in the November 6, 2017 report to Council: "*As part of the application, the applicant has proposed to relocate an existing Statutory Right of Way and storm sewer. The north portion of the site includes a bio filtration/detention pond constructed in 2007 as part of the overall DFO compensation for the Gloucester Industrial Park. A non-disturbance restrictive covenant was registered on the property in 2008 to protect the pond.*"

The modification to the Statutory Right of Way (SRW) pertains to relocation of a stormwater pipe, that conveys stormwater flows. A tributary of West Creek exists (classified as Class B) south of Highway No. 1 with flow from that watercourse piped until it is received in the pond at the northerly portion of the subject site. The pond and flow outlet point have been constructed in compliance with Department of Fisheries and Oceans (DFO) and Township's Streamside Protection provisions and are respected by the subject application.

A November 24, 2017 Langley Environmental Partners Society (LEPS) letter states: "This channelized creek is actually one of the main branches of West Creek, draining upstream agricultural lands, as well as the highway. The creek is Class B or yellow coded according to the Township of Langley's Watercourse Classification map; yellow coded streams are significant source of food, nutrient or cool water to salmon populations downstream."

The watercourse identified in the LEPS letter was authorized for elimination by DFO pursuant to an August 27, 2000 DFO authorization (see attached) and eliminated between 2005 to 2008. Consistent with the authorization, the flows were piped with a SRW registered at that time. The pipe and associated SRW is proposed to be relocated as part of the subject application.

In addition, the proponents' Qualified Environmental Professional (QEP) has provided a letter (copy attached) stating: "***In conclusion, we confirm that there is no stream on the subject property and that the Township is entirely within their jurisdiction to allow realignment of the storm sewer through the property***."

Attachment A	Aerial Site Photo
Attachment B	Site Plan
Attachment C	Civil Plan
Attachment D	SROW Relocation Plan
Attachment E	Restrictive Covenant non-disturbance area
Attachment F	November 24, 2017 Langley Environmental Partners Society (LEPS) letter
Attachment G	August 27, 2000 DFO authorization
Attachment H	Envirowest Consultants Inc. letter dated November 30, 2017

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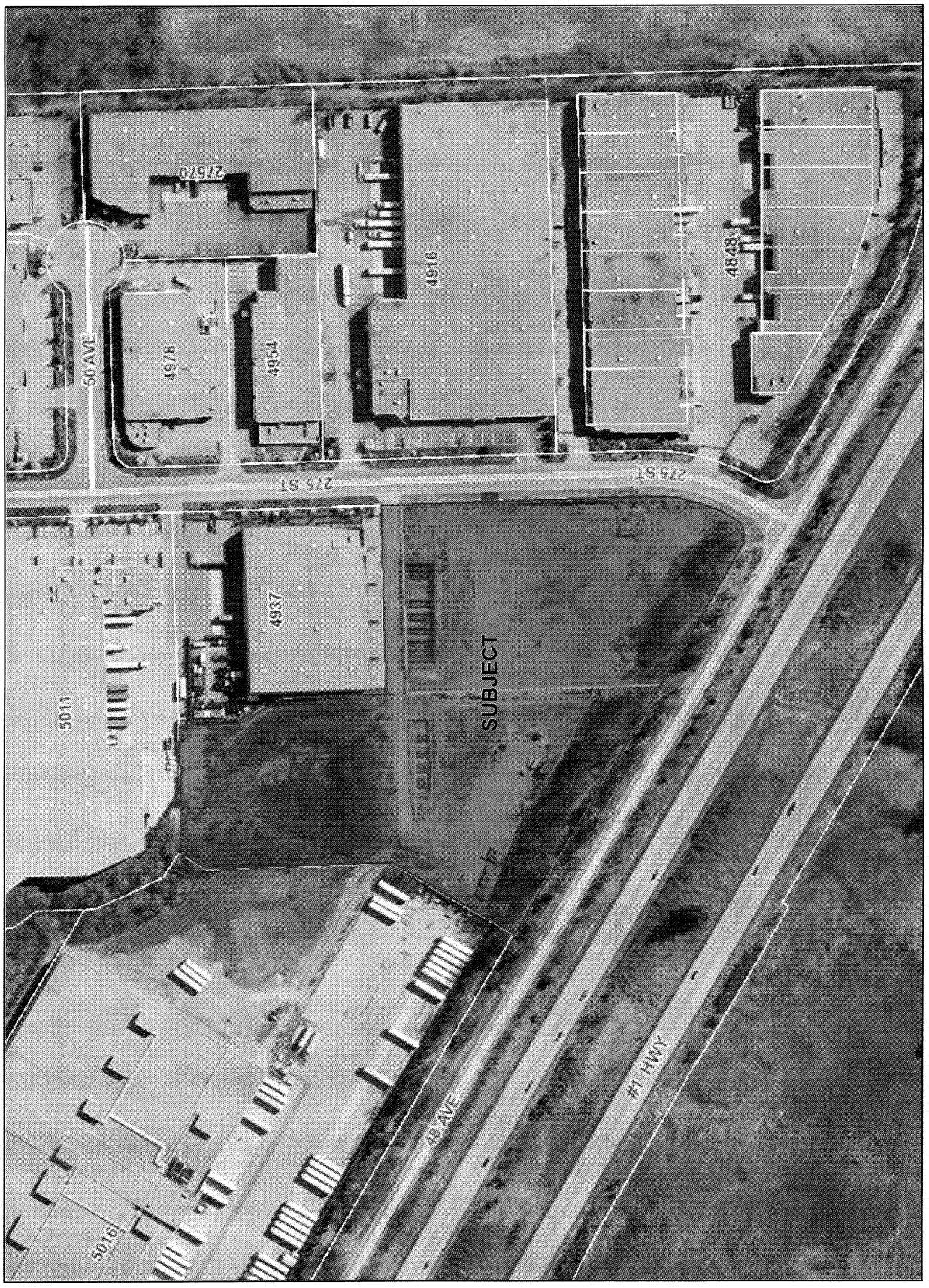
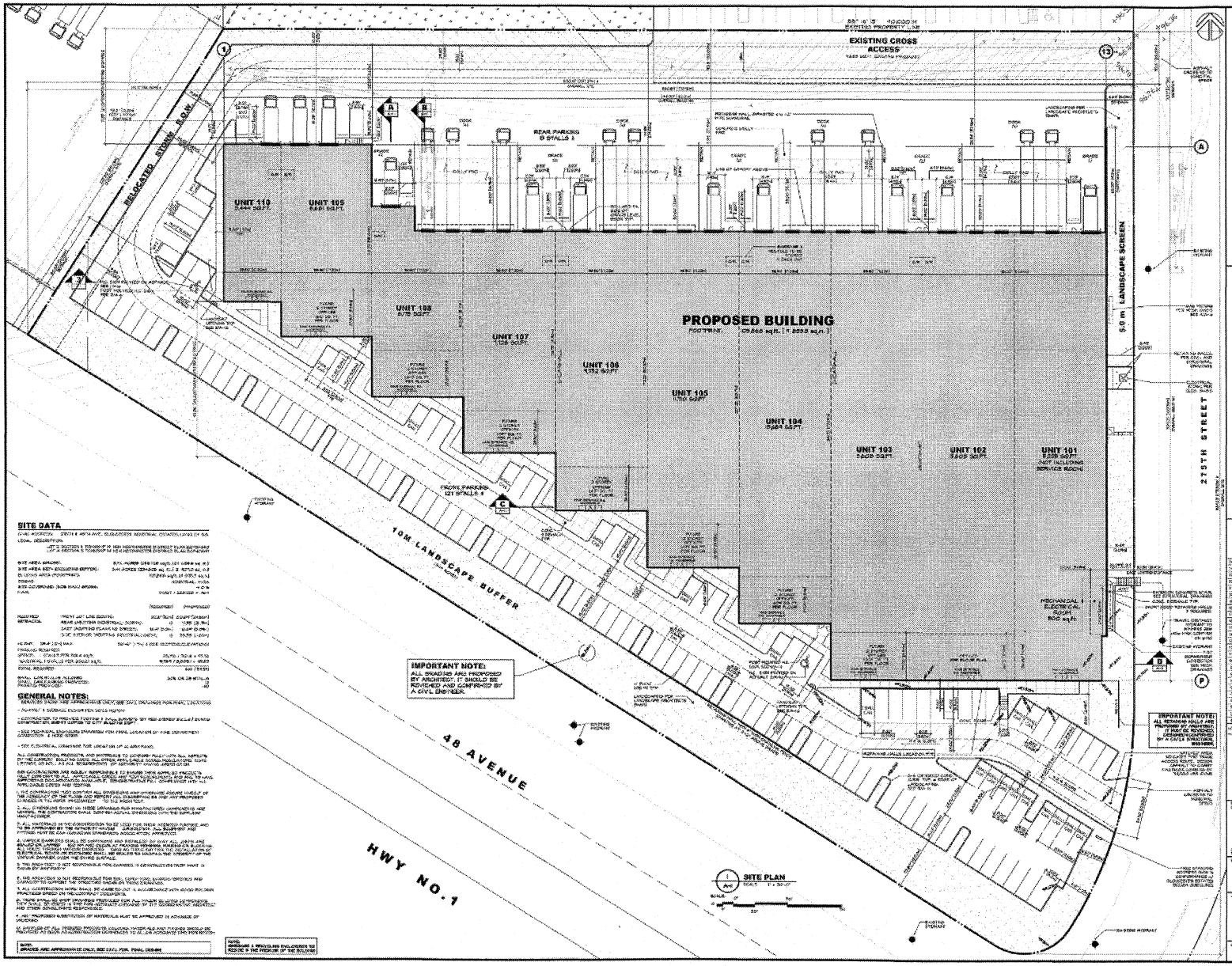
Attachment A



Document Released Under the Access to Information Act / Document divulgué en vertu de la Loi sur l'accès à l'information.



SITE DATA

GENERAL NOTES:

Beedie

CHIP BARRETT ARCHITECT

D.FORCE "DESIGN FIRST"

275TH AND 48TH SPEC

SITE PLAN

A-1

Attachment B

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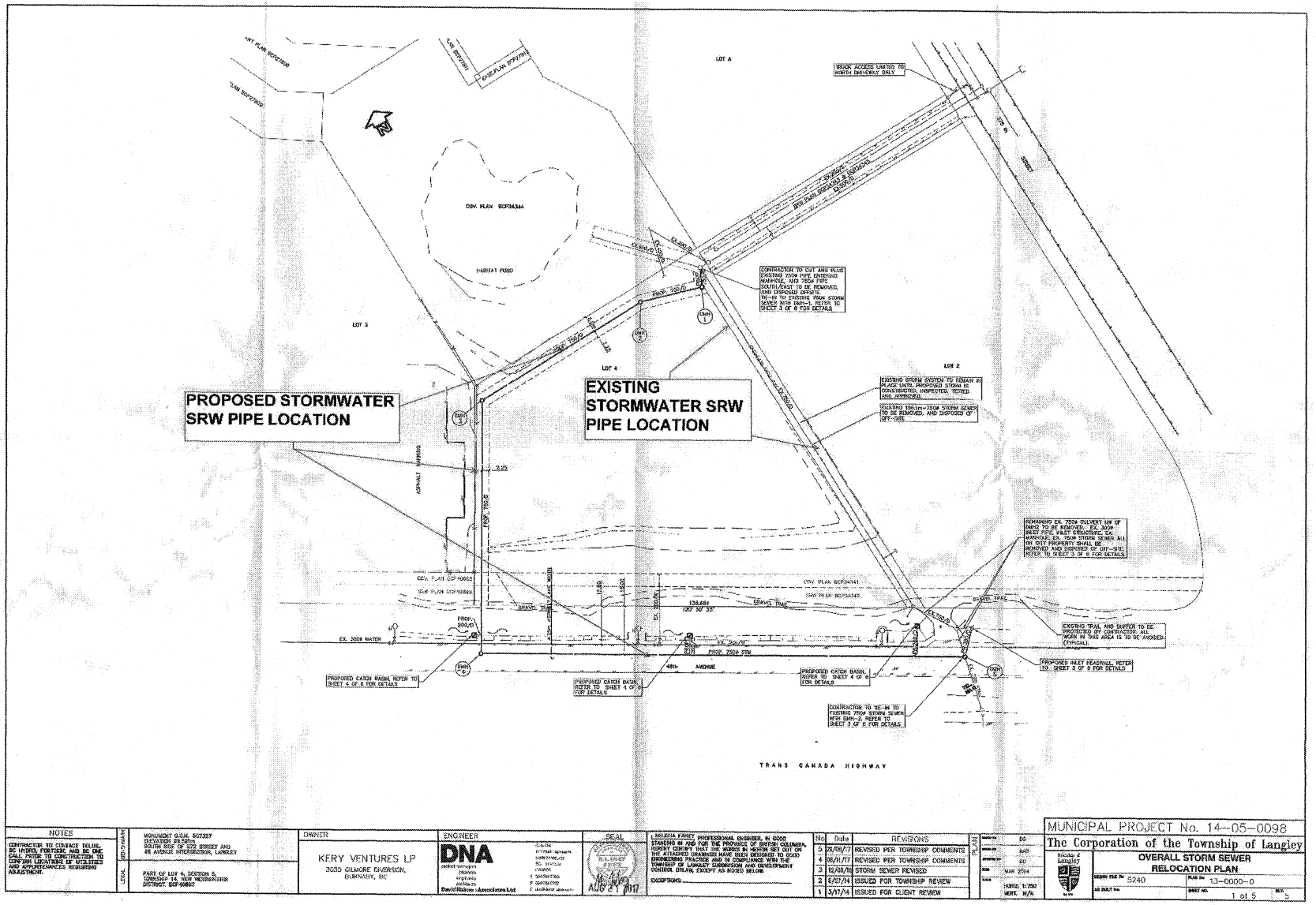

NOTES

CONTRACTOR TO CONTACT TELUS, BC HYDRO, FORTISBC AND BC ONE CALL PRIOR TO CONSTRUCTION TO CONFIRM LOCATIONS OF UTILITIES AND APPURTENANCES REQUIRING ADJUSTMENT.

MONUMENT G.D.M. 902327
ELEVATION 39.501m
SOUTH SIDE OF 222 STREET AND 48 AVENUE INTERSECTION, LANGLEY

PART OF LOT 4, SECTION 5, TOWNSHIP 15, NEW WESTMINSTER DISTRICT, BCP 40652

OWNER
KERY VENTURES LP
3035 GILMORE DIVERSION, BURNABY, BC

ENGINEER
DNA
David Nikkow Associates Ltd

SEAL
AUG 21 2017

I, BRUESIA FAHEY, PROFESSIONAL ENGINEER, IN GOOD STANDING IN AND FOR THE PROVINCE OF BRITISH COLUMBIA, HEREBY CERTIFY THAT THE WORKS IN HEREIN SET OUT ON THE ATTACHED DRAWINGS HAVE BEEN DESIGNED TO GOOD ENGINEERING PRACTICE AND IN COMPLIANCE WITH THE TOWNSHIP OF LANGLEY SUBDIVISION AND DEVELOPMENT CONTROL BYLAW, EXCEPT AS NOTED BELOW.

EXCEPTIONS: _____

No.	Date	REVISIONS
5	21/08/17	REVISED PER TOWNSHIP COMMENTS
4	08/01/17	REVISED PER TOWNSHIP COMMENTS
3	15/08/16	STORM SEWER REVISED
2	5/27/14	ISSUED FOR TOWNSHIP REVIEW
1	3/17/14	ISSUED FOR CLIENT REVIEW

PLAN
DESIGNED: BS
DRAWN: MB
APPROVED: BS
DATE: MAR 2014
SCALE: HORZ. 1:750 VERT. N/A

MUNICIPAL PROJECT No. 14-05-0098
The Corporation of the Township of Langley

OVERALL STORM SEWER RELOCATION PLAN

DESIGN FILE No. 5240
PLAN No. 13-0000-0
AS BUILT No.
SHEET NO. 1 of 5
REV. 5

Attachment C

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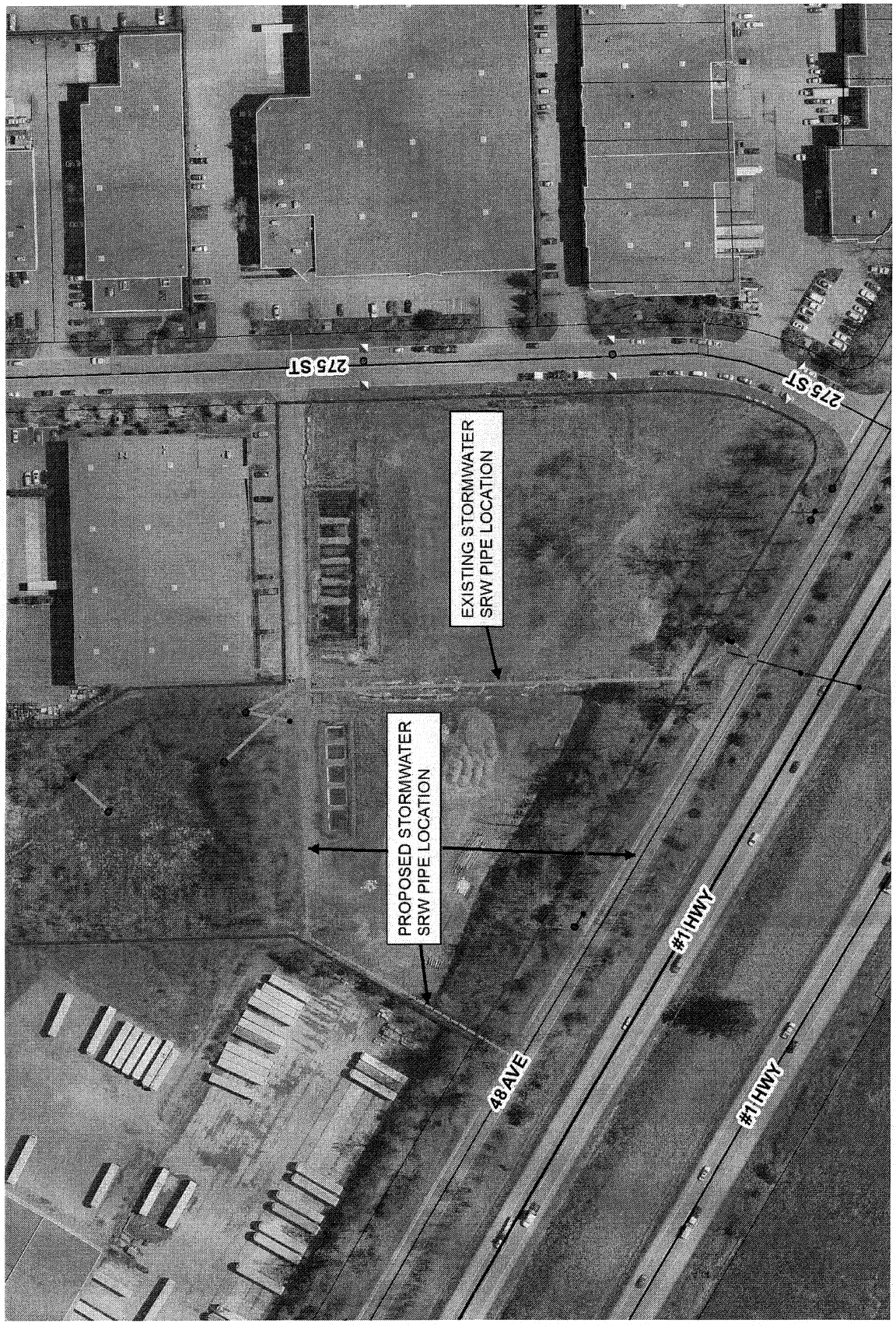
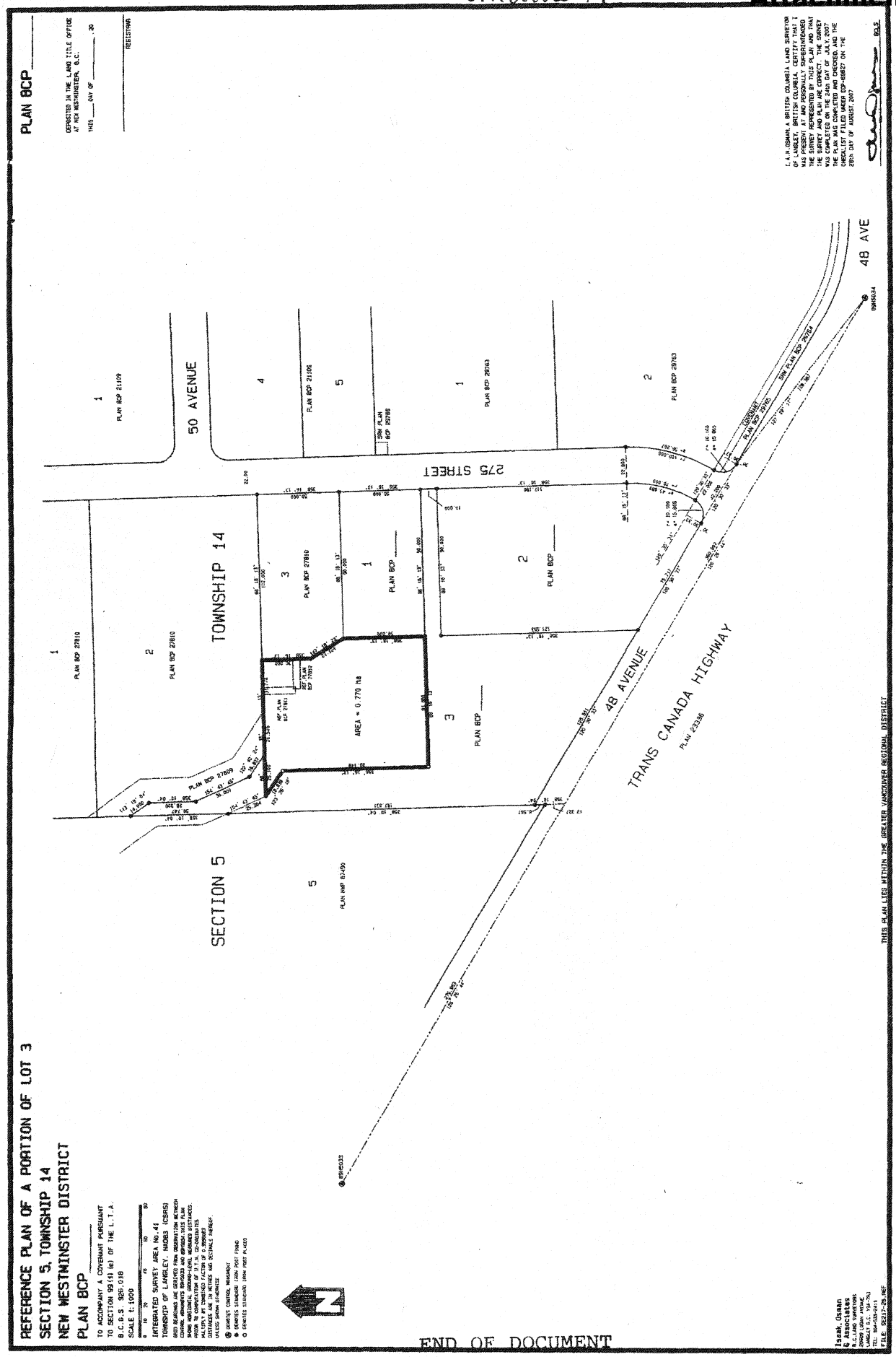
Attachment D



Document Released Under the Access to Information Act / Document divulgué en vertu de la Loi sur l'accès à l'information.



END OF DOCUMENT

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Attachment F

LANGLEY ENVIRONMENTAL PARTNERS SOCIETY

#201- 4839- 221 Street, Langley, B.C. Canada V3A 2P1 (604) 532.3511

Revenue Canada Charitable Number: [redacted]

www.leps.bc.ca

s.19(1)

s.24(1)

November 24, 2017

RE: Development Permit Application No. 100890 (161884 Canada Inc. / Beedie Development Group / 4825 275 St.)

To: Mayor and Council;

We wish to alert you to information regarding the Class B creek that has been omitted from the development permit application No. 100890 (please refer to attached map). This application came before council on November 6. The application refers to the modification of "Statutory Right of Way BB184653 (Plan BCP 34343)" (page 2, item f., under "*... the following items will need to be finalized*") but does not note the stream classification.

We are concerned that the omission of this information could have adverse impacts to West Creek and upstream habitat.

This channelized creek is actually one of the main branches of West Creek, **draining upstream agricultural lands, as well as the highway**. The creek is **Class B or yellow coded** according to the Township of Langley's Watercourse Classification map; yellow coded streams are significant source of food, nutrient or cool water to salmon populations downstream. Yellow coded streams require a 20m setback from both banks (Township of Langley's Streamside Protection Regulation): https://webfiles.tol.ca/CommDev/Brochures/Streamside%20Protection%20&%20Enhancement%20Brochure.pdf).

This creek enters a Class A or red coded (salmon bearing) stream only 160m downstream of this development permit area.

It is our hope that in sharing this information, the creek will be considered with due respect as a nutrient value stream and an important section of West Creek.

Sincerely,

[redacted]

Encl. Stream details up and downstream of application property

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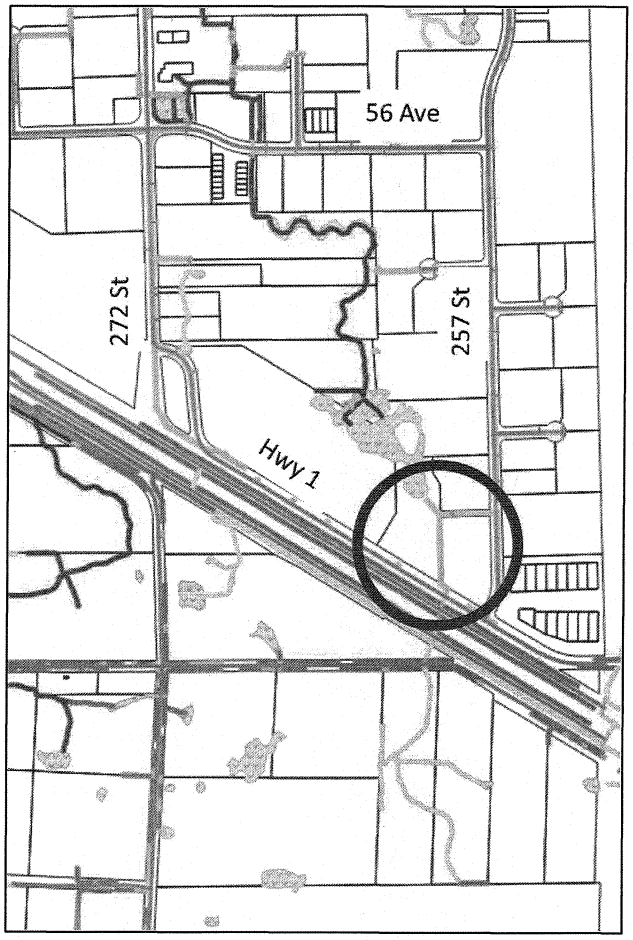
Stream details up and downstream of application property:
(source: Township of Langley's online mapping system, Geosource)



Blue circle indicates the properties associated with this application, please note Class B stream south of Hwy 1 that flows under the highway and 48 Ave to these properties.

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Attachment G

Fisheries and Oceans / Pêches et Océans

Authorization # 99-HPAC-PA2-000-000217
MELP File #A2004880

AUTHORIZATION FOR WORKS OR UNDERTAKINGS AFFECTING FISH HABITAT

Authorization issued to:

Name: 161884 Canada Inc.: Gloucester Industrial Estates (herein also referred to as "Gloucester")

s.19(1)

Address: 310 - 1001 West Broadway, Vancouver, BC V6H 4B1

Contact: [redacted]

Telephone: (604) 856-3156

Facsimile No: (604) 856-3384

Location of Project:

Tributaries to West and Nathan creeks within the Gloucester Industrial Estates in Langley, generally encompassing lands north of the Trans-Canada Highway, west of the Langley-Abbotsford boundary, east of 264th Street and south of 60th Avenue.

Valid Authorization Period:

The valid authorization period for the harmful alteration associated with various land development activities is from 01 May, 2000 through 15 September, 2005.

As specified herein, this document only authorizes the destruction of the fish habitat and associated compensatory works until 15 September, 2005. If any phase of the project is not completed by that date, such that fish habitat may be affected, a new application pursuant to Section 35(2) of the Fisheries Act may be required. Should this Authorization expire without the works proceeding, and no alterations to the project design or DFO policy, legislation and/ or guidelines have occurred, an amendment for an extension to this authorization may be considered.

Document Released Under the Access to Information Act / Document divulgué en vertu de la Loi sur l'accès à l'information.

Description of Works or Undertakings:

The harmful alteration hereby authorized includes a number of undertakings which are listed below and numerically referenced to a plan of existing drainage (refer to ECL Drawing No. 467-02-11, Rev. 03, attached in Appendix A).

In the Northeast Quadrant of the development -

Site 1. realignment and permanent elimination of riparian vegetation associated with the fisheries sensitive zone (i.e. relaxation of the setback boundary) adjacent to a watercourse;
Site 2. elimination of a watercourse; and,
Site 3. elimination of a ravine, elimination of a portion of a wetland, and permanent elimination of riparian vegetation associated with the fisheries sensitive zone (i.e. relaxation of the setback boundary) adjacent to a wetland.

In the Southeast Quadrant of the development -

Site 8. elimination of a watercourse;
Site 9 realignment of a watercourse;
* Site 10. elimination of a watercourse; and,
Site 23. elimination of 5 m of watercourse.

Site 10 is shown on the "Existing Drainage" map (see page 14). The "Ultimate Drainage" map (page 15) shows the watercourse no longer present.

In the Southwest Quadrant of the development -

Site 11. elimination of a watercourse;
Site 12. elimination of a watercourse;
Site 13. elimination of a pond;
Site 14. elimination of a pond;
Site 15. elimination of a pond;
Site 16. elimination of a pond and watercourse;
Site 17. realignment of a watercourse;
Site 18. elimination of a watercourse;
Site 19. elimination of a pond and watercourse;
Site 20. elimination of a pond;
Site 21. elimination of riparian vegetation; and,
Site 22. elimination of a watercourse.

These works are more specifically described in the following submissions and drawings:

Appendices:

a). Appendix A: ECL Envirowest Consultants Limited (ECL) Drawing No. 467-02-11, Revision 03 entitled "Existing Drainage" dated May 2000, and ECL Dwg No. 467-02-12, Revision 05 entitled "Ultimate Drainage", dated May 2000;

b). Appendix B: Habitat balance prepared by ECL;

c). Appendix C: The application for Environmental Review submitted by ECL on behalf of

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161884 Canada Inc., dated June 8, 1999;

d). Appendix D: ECL Drawing Nos.:
- 467-06-01R (dated March 1999);
- 467-02-09, Revision 00 (dated April 12, 1999);
- 467-04-06, Revision 01 (dated August 27, 1998);
- 467-02-08, Revision 01 (dated September 13, 1999);
- 467-02-10A, Revision 01 (dated August 9, 1999);
- 467-02-10B, Revision 01 (dated August 9, 1999);
- 467-02-13, Revision 00 (dated May 8, 2000);
- 467-02-14, Revision 00 (dated May 8, 2000);
- 467-02-15, Revision 00 (dated May 8, 2000);
- 467-02-16, Revision 00 (dated May 8, 2000);
- 467-02-17, Revision 00 (dated May 8, 2000).

e). Appendix E: Aplin & Martin Consultants Ltd. Drawing Nos. 96025SR-1, Revision 1; 96025SR-2, Revision 2; and 96025SR-3, Revision 2, all dated May 1997;

s.20(1)(b)

f). Appendix F: Hunter Laird Engineering Ltd. Job No. 4518, Sheets 9 of 14 and 10 of 14, both Revision A and dated July 29, 1999.

g). Appendix G: Copies of Letters of Credit totalling [redacted] and the Letter of Credit Reduction Schedule;

h). Appendix H: Copies of the restrictive covenant documents, registered in favour of the BC Ministry of Environment, Lands and Parks under Section 219 of the provincial Land Titles Act;

i). Appendix I: Gloucester Industrial Estates 1998 Stormwater Management Plan: Final Report by Stantec Consulting Ltd.

Schedules:

Schedule A: DFO/ MELP Riparian Planting Guidelines.

Conditions of Authorization:

1. Gloucester confirms that all plans and specifications relating to this Authorization have been duly prepared and reviewed by appropriate professionals working on behalf of Gloucester. Gloucester acknowledges that it is solely responsible for all design, safety and workmanship aspects of all of the works associated with this Authorization.

2. Gloucester confirms that the location and general design of the works are to be consistent with the information provided to the agencies and that any material deviations from such designs must be reviewed and approved by all agencies having jurisdiction in this matter.

3. The conditions of this Authorization notwithstanding, DFO may at any time and at their

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sole discretion, direct the Gloucester and/ or their agents and/ or contractors, to suspend or alter any work or activity associated with this project, to avoid or mitigate adverse impacts to fisheries resources. Further, DFO may at any time and at their sole discretion direct the Gloucester and/or their agents and/ or their contractors, to carry out at the Gloucester's own expense any works or activities deemed necessary by DFO to avoid or mitigate adverse impacts to fisheries resources.

4. DFO must be notified of any future modifications to the existing drawings referred to in this Authorization and upon notification, may require plans and specifications to review and/ or approve prior to any work commencing.

Conditions that relate to works in or near watercourses:

5. Instream works may only be undertaken during the period between 01 August and 15 September of any year of this development. Any extensions to the work window will be considered on a case by case basis (season and weather dependent) and must have approval for extension from DFO and/ or MELP. An environmental monitor must be present full time during all instream works, unless otherwise agreed to by DFO and/ or MELP. The environmental monitor must have the authority to alter or halt works should they feel the works are detrimental to fisheries resources. Gloucester must provide a copy of the written authority, providing the name of the environmental monitor, contact number and a brief outline of relevant experience related to the proposed works to DFO, MELP and the Township.

6. All other works within the fisheries sensitive zones (i.e. setback areas) must be monitored daily during construction and during or following any storm event which may occur during the construction phase.

7. The environmental monitor must have experience in stream construction or restoration as well as sediment and erosion control.

8. All instream work must be undertaken and completed in isolation of flowing water. Generally, this is accomplished by diverting, enclosing or pumping the water around the work site. Flow to downstream portions of the stream must not be cut off at any time during construction. In addition, the point of discharge to the creek must be located immediately downstream of the work site.

9. Prior to commencement of instream works, an environmental consultant or other qualified professional who is acceptable to DFO and/ or MELP must conduct a fish and amphibian salvage in and around areas potentially affected by siltation or de-watering. Appropriate fish collection permits must be obtained prior to any instream works commencing. The consultant/monitor must ensure that the appropriate DFO and MELP staff have been contacted and are advised of the commencement of instream works.

10. Sediment and erosion control measures must be installed to the standards outlined in the BC Environment/DFO "Land Development Guidelines for the Protection of Aquatic Habitat". All work must be conducted in a manner that will prevent the release of sediment or sediment-laden water into any watercourse.

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In this regard, a sediment, erosion and runoff control plan must be prepared by a qualified, trained professional and implemented prior to any site preparation works and/ or construction. These facilities must be maintained until the occupancy permit stage, or until no longer applicable to the site conditions. These facilities must be maintained and be working adequately to control discharges from the site.

11. All disturbed areas within the leavestrips should be hydro-seeded or covered to prevent surface erosion. If work is undertaken late in the growing season, normal seeding may not be effective in preventing surface erosion. In this regard, the entire disturbed area may require stabilization through hydro-seeding with heavy mulch or by installing geotextile seed mats.

12. All constructed streambank slopes must not exceed 2:1 slopes (horizontal: vertical). All constructed slopes must be covered with a minimum 6" topsoil to ensure a reasonable plant growth medium, and an appropriate native seed mixture and biodegradable geotextile or hydro-seed (if deemed necessary by a qualified professional) to ensure stability.

13. Riparian revegetation must be completed in accordance with the specified plans, attached in Appendix D. Any other disturbed areas within the leavestrip areas, which are not included in a specified revegetation plan, must be replanted in accordance with the DFO/ MELP guidelines for riparian revegetation, attached as Schedule A.

14. Machinery is not permitted to work within the wetted perimeter of the stream. All machinery on the site must be in good repair and free of excess oil and grease. No fuels lubricants, construction wastes or other deleterious substances may enter the watercourse at any time. Emergency spill kits must be kept on site and be readily accessible at all times in case of release of a deleterious substance to the environment. Any spill of reportable quantities must be immediately reported to the Provincial Emergency Program (24 hour phone line: 1-800-663-3456).

15. All construction materials, such as fill or riprap, must consist of inert materials. Rock used as riprap must be durable and suitably graded to resist movement by stream flow. Rock and/ or riprap placement must be completed so as to ensure their stability within the creek system.

16. Topsoil, debris from construction, concrete and/ or concrete leachate, overburden, soil, grout, oil, grease or any other substance deleterious to aquatic life must be disposed of or placed in a manner that will prevent their entry into any watercourse, ravine, floodplain, or storm sewer system.

    In this regard, DFO notes that if any cast in place concrete works are to be undertaken, there may exist high potential for concrete and/ or concrete leachate to enter a watercourse. Concrete leachate is alkaline and highly toxic to fish and aquatic life and DFO requires that measures be taken to prevent any incidence of concrete from entering the watercourse. In case of emergency, a concrete buffer, such as CO2, must be kept on site to mitigate any impacts from the escape of concrete. To ensure that no concrete or concrete leachate impacts downstream fish or fish habitat, DFO advises that the downstream pH be monitored regularly until completion of the works. If a significant change in pH is noted (i.e. pH below 5.0 or above 9.0), then emergency measures must

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be implemented to neutralize pH levels. In addition, any concrete that does escape must be cleaned out of the channel immediately. All concrete work must be carried out during dry weather and low water conditions.

17. Any future stream crossings must be clear span bridges, bottomless arch culverts, or oversized culverts with a minimum 300-mm depth of gravels throughout, unless otherwise approved by DFO and MELP. Approval for stream crossings will be considered on a site by site basis.

18. ***The following personnel must be contacted and advised of any instream works or works within the fisheries sensitive zone (i.e. setback areas), a minimum of five (5) days in advance of the commencement of works.*** In addition, DFO and/ or MELP must be contacted for site inspection for any relocated or constructed watercourses prior to the release of water into newly constructed habitat:

a) The Fishery Officer in charge of the Fraser Valley West Field Office at tel: (604) 607-4160 or fax: (604) 607-4199;
b) The DFO Habitat Biologist for the Langley area at tel: (604) 666-6310 or fax: (604) 666-6627 (current contact Suzanne Thorpe); and,
c) The MELP Fish and Wildlife Habitat Protection Officer for the Langley area at tel: (604) 582-5239 or fax: (604) 930-7119 (current contact John Summers).

19. For any 'individual' project completed within the specified time period, the environmental monitor must submit three (3) copies of a 'summary' monitoring report to MELP and one (1) to this Department within 90 days of project completion.

As described herein, Site numbers 1 through 23 represent 'individual' projects, as do each of the compensatory sites A through D; however, the sites may be listed and detailed within the same monitor's report, if undertaken within the same calendar year. The monitor's report must indicate that the project has been completed and shall include the following:

a) a complete list of all outstanding or incomplete works for any 'project' as defined herein;
b) date-stamped photos of the site(s) before, during and after construction;
c) date-stamped photos of the site post-planting;
d) confirmation of compliance with the Authorization; and,
e) details of any difficulties encountered and how they were handled.

20. In the event of any significant incident(s) which may occur during works associated with this project (i.e. oil/ gas spill, slope failure, sediment or erosion control problem), the environmental consultant should notify both DFO and MELP representatives as soon as possible. All emergency-reporting procedures must be followed on an immediate basis. The environmental monitor should have an emergency call out procedure in place prior to the commencement of works.

21. The environmental monitor must post a readily visible sign identifying their company name and telephone number at the entrance(s) to the site.

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22. ***A copy of this Authorization must be forwarded to all contractors and/or crew supervisors and must be present on the site while work is proceeding.***

23. ***It is understood that by proceeding with the works specified herein, the applicant's agent(s) and/ or contractor(s) and their work crews, shall have indicated an understanding of and agreement to the conditions within this Authorization, and that both DFO and MELP have the authority to inspect, and if necessary, stop any works that are not in compliance with the agreed to terms and conditions or if the agencies have fisheries related concerns.***

Conditions relating to stormwater management for development:

24. Design of the stormwater system shall be consistent with final approval of the document "Gloucester Industrial Estates Stormwater Management Plan: Final Report" by Stantec Consulting Ltd. (attached as Appendix I), currently under review. Detailed engineering design of the stormwater system must be reviewed and approved by DFO, MELP and the Township of Langley prior to site development.

25. Water treatment shall be provided for all areas not zoned or developed for industrial purposes as at May 1, 2000. Treatment will occur in first-flush treatment wetlands where feasible, while other areas will be treated by on-site oil-water separators. Envirowest Drawing No. 467-02-13 indicates treatment type for all lands within Gloucester Estates. Envirowest Drawing Nos. 467-02-14, 467-02-15, 467-02-16 and 467-02-17 provide details for first-flush treatment wetlands.

26. Stormwater from most of the Gloucester Estates development will be detained in two large detention features to be located within the golf course. Properties downstream, or outside of the catchments of these two areas must provide onsite detention that meets or surpasses the specifications outlined in the "Land Development Guidelines for the Protection of Aquatic Habitats".

27. Stormwater outfalls must be set back at least three (3) metres from the streambank and at an angle of approximately 45 degrees to the direction of stream flow. The outfall channel should be armoured with clean angular rock or other type of energy dissipater and stream bank stabilization, as approved by MELP.

Conditions relating to the Restrictive Covenant/ Leavestrip Area: Appendix A

28. All leavestrip areas shown on ECL Drawing No. 467-02-12 will be protected by a restrictive covenant to be registered against the title of the property(ies) affected under Section 219 of the Land Titles Act, as per the requirements of MELP. All leavestrips are to be left in a totally undisturbed, naturally vegetated state in perpetuity. The covenant boundary must be surveyed by a registered BC Land Surveyor and a permanent fence must be constructed at the covenant boundary between development areas and the covenant areas prior to the commencement of any site development, unless otherwise agreed to by MELP.

29. After the compensatory habitat is functioning as intended, Gloucester shall not carry on any work or undertaking that will adversely disturb or impact the compensatory habitat,

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and it will take all reasonable steps to ensure that the compensatory habitat is not disturbed by others, so long as Gloucester is associated with Gloucester Industrial Estates.

30. Buildings must be set back a minimum of one and one-half (1.5) metres from the restrictive covenant boundary, except to the north of the railway tracks where buildings are to be setback a minimum of five (5.0) metres from the restrictive covenant boundary.

Conditions that relate to all mitigatory and compensatory habitats:

31. The compensatory habitats shall consist of a number of features which are listed below and numerically referenced to a plan of ultimate drainage (refer to ECL Drawing No. 467-02-12, Revision 03, attached in Appendix A). These works are also described in the Habitat Balance (Appendix B). Design drawings are referenced for each project on the ultimate drainage plan.

In the Northeast Quadrant of the development -

Compensatory Site A, located at or near Site 1:

- Enhancement of an existing watercourse, including partial realignment, wetland/pond creation and riparian enhancement (refer to ECL Drawing No. 467-06-01R, dated March 1999). This watercourse discharges to the existing roadside ditch at 60th Avenue, subsequently flowing in a culvert under 60th Avenue.

- Native shrubs shall include a mix of species (minimum size #2 pot) including snowberry, red elderberry, salmonberry, red-flower currant, pussy willow, red-osier dogwood and thimbleberry (no species to consist of more than 20 percent of the total). Live stakes shall be planted at a density of 5 stakes per square metre.

- Large woody debris (tree, log and rootwad) placement will be undertaken as directed by the environmental consultant. All large woody debris will be placed in such a manner so as to ensure that they are appropriately keyed into the sides of banks or are otherwise stable. Rootwads should be placed so that the gnarly portions of the root mass are below the wetted perimeter of the creek/ pond area, thus providing maximum refuge cover for juvenile salmonids. Trees and logs must have a minimum diameter of 350 mm; rootwads a minimum diameter of 2.0 metres.

- Marsh planting in the northeast quadrant of the development will be undertaken as per the specifications indicated on ECL Drawing 467-02-10A (species list). All wetland planting will meet the minimum density criteria of 4 plants per square metre. Marsh planting may be undertaken early in the spring planting season post construction, provided that appropriate sediment control measures are undertaken throughout the winter season to prevent downstream sedimentation from such areas. Marsh planting must be completed by April 30, the end of the spring planting season.

In the Southeast Quadrant of the development -

Compensatory Site B, located at or near Site 9:

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- Re-alignment of a watercourse, including development of pools (each with two rootwads) at 30 metre intervals, boulder complexing (minimum 6 boulders per 30 metre interval), and riparian enhancement (refer to ECL Drawing No. 467-02-09, Revision 00, dated April 12, 1999, and Hunter Laird Engineering Ltd. Job No. 4518, Sheets 9 of 14 and 10 of 14, both Revision A and dated July 29, 1999.

- A 1 metre wide strip on each side of the channel/pools is to be live-staked with a combination of red-osier dogwood and willow at a density of 5 stakes per square metre. Densities for trees and shrubs shall be one per five square metres and one per one square metre, respectively. Trees shall be increased in number to ten percent of total plants. Salvaged plant material may be used as an alternative to nursery stock, provided that it meets the required success rate.

- Rip rap is to be deleted from the side slopes of the pools; refer to ECL Dwg. #467-02-09.

- Boulder and boulder cluster placement will be undertaken as per the direction of the environmental consultant. Boulder complexing should be undertaken to provide fish habitat, direct flow, promote flushing, prevent infilling and to ensure bank stabilization, where necessary. Boulders must be appropriately keyed into the sides of banks and placed to ensure they are stable. Boulder diameter may be varied, depending on stream cross-section and gradient, but must average 400mm.

In the Southwest Quadrant of the development -

Compensatory Site C, located at or near Site 11:

- Pond/wetland creation north of Gloucester Way within the lands designated as future golf course (refer to ECL Drawings 467-02-10A and 467-02-10B).

- Wetland plants shall be planted at a density of four plants per square metre and trees and shrubs at densities one per five square metres and one per one square metre, respectively.

- The configuration of the constructed habitat may be revised subject to advance notification to DFO and completion of a similar or greater amount of habitat.

- Large woody debris placement should provide a minimum average of 25% cover in pools/ wetland using either gnarly rootwads and/ or whole tree sections.

Compensatory Site D, located at or near Site 17:

- Re-alignment of a watercourse south of Gloucester Way (refer to Aplin & Martin Consultants Ltd. Drawing Nos. 96025SR-1, Revision 1; 96025SR-2, Revision 2; and 96025SR-3, Revision 2). The portion adjacent to Gloucester Way is to be located within a 15-metre wide corridor; habitat details for this portion are shown in ECL Drawing No. 467-04-06, Revision 01. Habitat details for the remaining portions are shown in ECL Drawing No. 467-02-08, Revision 01. The north-south portion is to be constructed with a corridor width of 25 metres. Wherever possible, existing trees and

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shrubs are to be retained along the margins of the new watercourse. Where existing vegetation is disturbed it will be re-planted in accordance with the specifications on ECL Drawing No. 467-02-08, Rev 01, and as detailed further herein.

- Deflector logs, aeration logs and rootwads shall each be installed in the channel at 10 metre intervals. Boulder clusters, each comprised of a minimum of four boulders of a minimum diameter of 400mm, are to be installed at 5 metre intervals.

- A one metre wide strip on each side of the channel is to be live-staked with a combination of red-osier dogwood and willow at a density of 5 stakes per square metre. Densities for trees and shrubs shall be one per five square metres and one per one square metre, respectively. Salvaged plant material may be used as an alternative to nursery stock.

- View/ access points around the constructed wetland/ pond areas at the "golf course" will be constructed so that access into and around the watercourse is discouraged. If access is or becomes problematic (i.e. interferes with the success of any aspect of the constructed habitat), additional measures may be required to prevent human encroachment into such areas (i.e. low fencing).

Conditions that relate to the monitoring/ evaluation program:

32. For each component of the overall habitat compensation plan, Gloucester shall carry out a monitoring program (the "Monitoring Program") which will extend for five (5) years post-construction and will include the following:

a) if a project only involves disturbance(s) to, or removal of, riparian revegetation, a brief report describing plant survivorship and including photos is required yearly to three (3) years post-planting.

b) an assessment of the physical stability (see details of b) below) of any newly constructed works must be conducted a minimum of two (2) times during the first winter, in November/ December and February/ March. Any non-compliance issues or other problems with any aspect of the functioning of newly constructed habitat or that may have a negative impact to fisheries resources (e.g. erosion, slope failures) must be reported to both DFO and MELP within five (5) working days post-inspection and remediation measures implemented immediately, as approved by DFO and/ or MELP;

c) an annual photographic (date stamped) assessment of the compensation habitat and physical stability of the works, noting any changes in the function of the habitat for five (5) years post-construction. The assessment should also include looking for any evidence of erosion, slumping, tension cracks, movement of instream structures, bed material changes, sediment or debris accumulation and sediment transport changes. If gravels have been placed instream, an estimation of gravel depth, noting any changes, should be conducted each time the site is visited;

d) an annual assessment of the planted riparian vegetation for three (3) years post planting. Plant survival must be at least 80% for ground cover, forbs and shrubs

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and 100% for trees for the duration of the monitoring program. Should this survivorship not be achieved, additional planting is required to be undertaken immediately during the planting season of, or immediately following, the assessment;

e) measurements of water temperature, pH, dissolved oxygen, and rough estimate of water flow should be recorded each time the site is visited for monitoring;

f) for relocated and/ or constructed watercourses and ponds, fish sampling must be undertaken using baited minnow traps, or an acceptable alternative sampling method, a minimum of once annually during the time of year that will maximize potential to determine fish presence;

g) for relocated and/ or constructed watercourses and ponds, assessment of in-stream aquatic invertebrate populations must be undertaken a minimum of once annually during the 2nd (second) and 5th (fifth) years of the five (5) year monitoring program and during the time of year that will yield maximum diversity and quantity of invertebrate species (usually during the late spring/ early summer). Sampling should be conducted in riffle-type habitats at a minimum of three (3) locations (upper, middle and lower stream reach) if the stream section is 15 meters in length or longer; at a minimum of one (1) location if the stream section is less than 15 meters in length. Invertebrates collected are to be counted and identified to the to the Family level. Data from the invertebrate assessment shall be submitted in the monitor's report.

h) the Monitoring Program shall be conducted by a qualified biologist, or other professional who has experience in this area, and who is acceptable to DFO;

i) the provision to DFO of the annual results of the Monitoring Program in a written report, including an as built plan (where applicable), and any other relevant documents and photographs, by the first of December of each year of the Monitoring Program;

j) the fifth years monitoring report for any project shall provide the results of the final year's monitoring and shall summarize the findings of the five years of annual monitoring. The final report will provide a functional assessment of the performance of the compensatory habitat and will include photographs of the constructed compensatory works;

k) should any deficiencies in the compensatory habitat be identified by Gloucester, the environmental monitor, any agents or contractors working on behalf of Gloucester, DFO and/ or MELP, the parties shall notify one another in a timely manner. Any identified deficiencies with regard to the form or functioning of the compensatory habitat must be addressed in a timely manner and communicated in writing to DFO and/ or MELP, and resolved as per their direction.

l) should the clauses in 33 b) or c) be enacted, an additional annual and final monitoring report will be required in the two years following its enactment.

33. The compensatory habitat will be deemed to functioning as intended if, in the opinion of

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DFO,

- the habitat is physically stable;
- it functions as designed,
- riparian vegetation has achieved the targeted survivorship;
- that there is sufficient aquatic invertebrate production to function to provide, in the opinion of DFO, sufficient food and nutrients to downstream habitats; and,
- where fish accessible habitat has been constructed, the site functions to provide accessible habitat for salmonids.

Following the initial monitoring period, and any extensions thereof, DFO will assess the success of the compensatory habitat and determine whether of not it is functioning as intended, and choose the appropriate course of action as outlined below:

a) the compensatory habitat is functioning as intended and will be self-sustaining without further major remedial work. The Monitoring Program will be terminated; or

b) the compensatory habitat is not functioning as intended. Gloucester shall extend the Monitoring Program, including remedial work, for a minimum of an additional two years to allow more time for the habitat to become adequately established;

c) the compensatory habitat is not functioning as intended and further remedial work is not likely to rectify the situation. Gloucester shall then carry out alternative compensatory works of similar habitat value within the same watershed and requiring an additional monitoring period.

34. Gloucester shall ensure that the compensatory habitat is functioning as intended for the lifetime of Gloucester Industrial Estates. If at any time Gloucester becomes aware that the compensatory habitat is not functioning as intended Gloucester shall carry out any works which are necessary to enable the compensatory habitat to function as designed. If Gloucester transfers its interest in Gloucester Industrial Estates, and the transferee assumes the obligations of this Authorization in a form satisfactory to DFO, Gloucester shall thereafter be relieved of these obligations.

s.20(1)(b)

35. Gloucester has delivered to DFO two Letters of Credit totalling [redacted] These Letters of Credit are to be reduced in accordance with the Letter of Credit Reduction Schedule (refer to Appendix G).

36. If the conditions of this Authorization are not met, DFO may draw upon the letters of credit to ensure that the agreed upon terms and conditions of this Authorization are duly carried out.

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The holder of this authorization is hereby authorized under the authority of section 35(2) of the Fisheries Act, R.S.C., 1985, c.F.14, to carry out the work or undertaking described herein.

This authorization is valid only with respect to fish habitat and for no other purposes. It does not purport to release the applicant from any obligation to obtain permission form or to comply with the requirements of any other regulatory agencies.

Failure to comply with any condition of this authorization may result in charges under the Fisheries Act.

This authorization form should be held on site and work crews should be made familiar with the conditions attached.

Date of issuance: August 29, 2000

Approved by: for Dale Paterson

Title: Area Chief, Fraser River Division Habitat Unit
Habitat and Enhancement Branch

161884 Canada Inc. (Gloucester) acknowledges that Fisheries and Oceans Canada has consulted with it regarding the terms of this Authorization, and confirms that it has reviewed and understands the terms of this Authorization, and it will comply with them.

Executed by an authorized signatory of 161884 Canada Inc. on the 31 thind day of August, 2000 in the presence of:

s.19(1)

[redacted]

Witness

Name (print):

Title (print):

161884 Canada Inc. (Gloucester)

[redacted]

Title (print)

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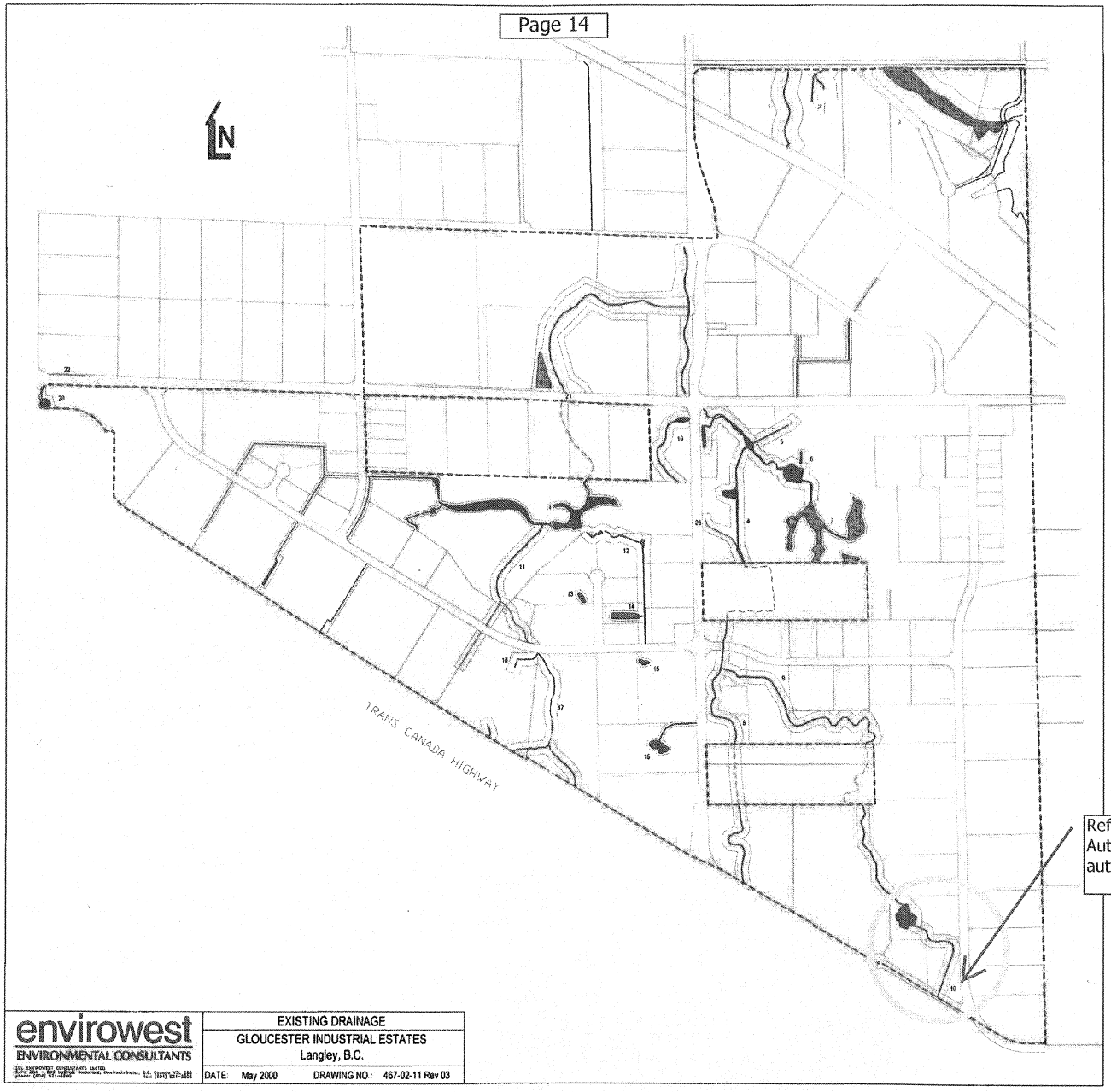

envirowest
ENVIRONMENTAL CONSULTANTS

EXISTING DRAINAGE
GLOUCESTER INDUSTRIAL ESTATES
Langley, B.C.

DATE: May 2000 DRAWING NO.: 467-02-11 Rev 03

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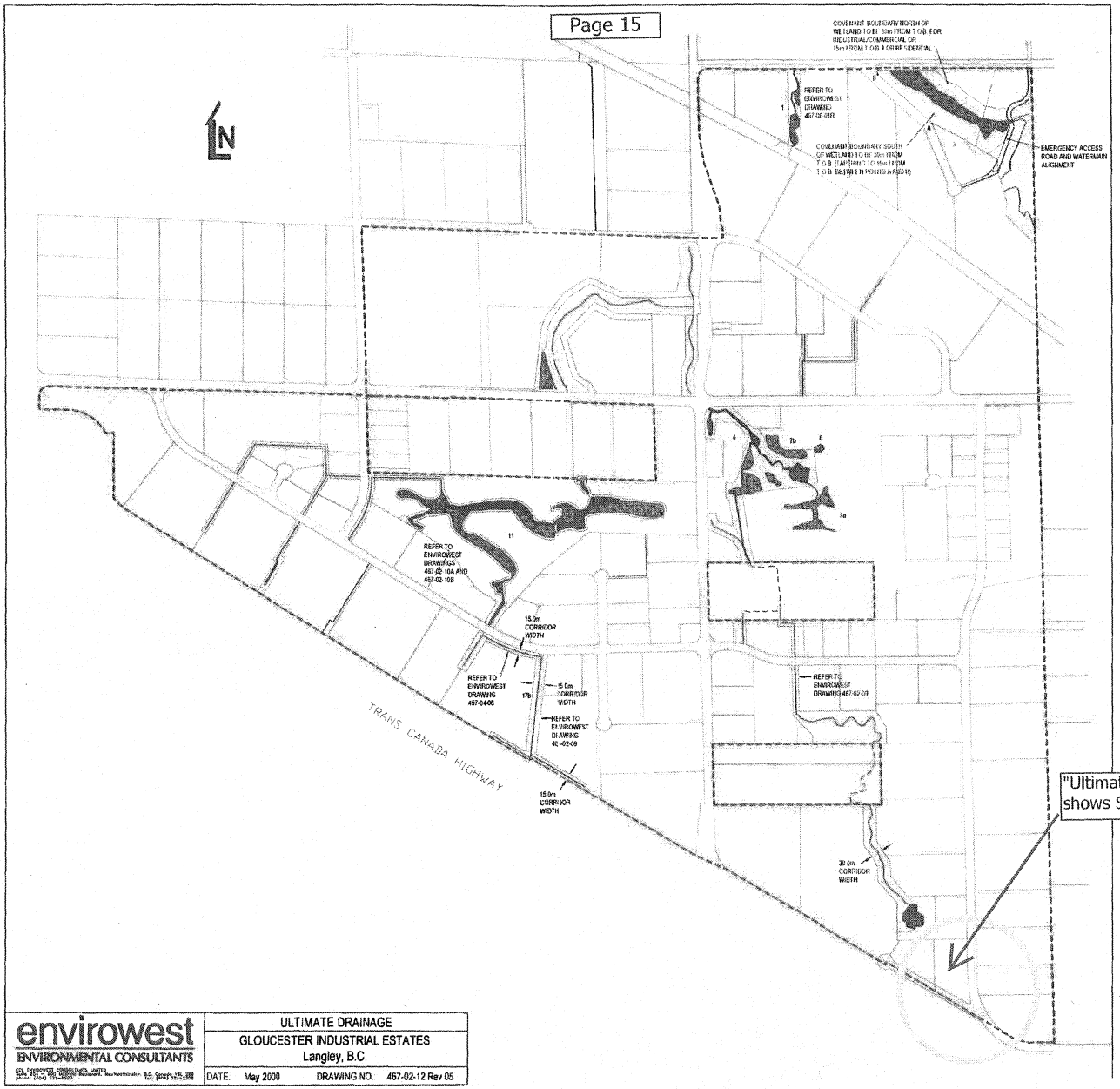

envirowest ENVIRONMENTAL CONSULTANTS	ULTIMATE DRAINAGE GLOUCESTER INDUSTRIAL ESTATES Langley, B.C.
	DATE. May 2000 DRAWING NO. 467-02-12 Rev 05

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Attachment H

envirowest consultants inc.
Suite 101 - 1515 Broadway Street
Port Coquitlam, British Columbia
Canada V3C 6M2
604-944-0502

November 30, 2017

TOWNSHIP OF LANGLEY
20338 – 65 Avenue
Langley, BC
V2Y 3J1

Attention: **Mr. Ramin Seifi, P.Eng., M.C.I.P.**
General Manager
Engineering and Community Development

Dear Mr. Seifi,

RE: DEVELOPMENT PERMIT APPLICATION 100890
4825 – 275 STREET, LANGLEY - WATERCOURSE MAPPING CONCERN

We have reviewed the November 24, 2017 letter from the Langley Environmental Partners Society (LEPS). This letter is addressed to the Township of Langley Mayor and Council and is intended to bring to their attention an apparent omission of information regarding a watercourse on the subject property. The development permit application makes reference to the proposed modification of a statutory right-of-way (RoW) through the property. We were in attendance at the Council meeting on November 27, 2017 when this matter was raised and discussed.

The LEPS letter makes reference to a channelized stream that is a main branch of West Creek. While not explicitly stated in the letter, the assertion made by LEPS is that this stream flows through the subject property as an open channel. The letter indicates the stream is Class B habitat and that such streams require setbacks of 20 metres on each side. An attachment to the LEPS letter, citing the Township's Geosource web-map, is referenced in support of the Class B designation.

As you may be aware, Envirowest has been involved with environmental planning at Gloucester Industrial Estates since the early 1990s. We are extremely familiar with the watercourses of the area and in particular, the drainage system at the subject site. Relevant information is summarized below.

In 2000, Fisheries and Oceans Canada (DFO) issued an Authorization agreement to 161884 Canada Inc. (Gloucester) allowing the alteration of watercourses throughout the business park, subject to provision of compensatory habitats. Maps appended to the Authorization identified streams that existed when the agreement was executed (Existing Drainage) and streams that would ultimately exist at complete build-out of the industrial park (Ultimate Drainage).

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Envirowest Drawing No. 655-55-01 (Attachment A) shows relevant portions of the two drawings. The map depicting existing drainage identified a stream flowing across the subject property. The map depicting ultimate drainage shows no stream on the subject property.

Aerial photography available on the Geosource web-map shows the subject site as generally undisturbed in 2005. The 2008 aerial image shows the property as cleared of vegetation with a roadway and storm sewer extending westward from 275 Street; the stream still exists at this point in time. The 2010 aerial image shows the property as almost completely filled and the stream completely eliminated. Storm sewers were installed to convey runoff from the south side of the property (including stormwater from Highway 1, local roads and lands south the highway) to a habitat pond at the north end of the property. The habitat pond is protected by a non-disturbance covenant registered on the title of the property. Storm sewers were installed through the property, within RoWs registered on the legal title of the property, in favour of the Township of Langley.

The Geosource map attached to the LEPS letter is consistent with the drainage condition described above. Blue lines on the map attached to the LEPS letter denote storm sewers conveying drainage across the site. This map does not show Class B stream habitat on the subject property; it correctly shows that no stream exists.

In allowing the enclosure of this stream in a storm sewer, the DFO Authorization acknowledged that fish habitat could be (and subsequently has been) eliminated from the property and that DFO would no longer have any interest in the property as habitat. The DFO Authorization ensured that replacement habitat would be (and subsequently has been) constructed elsewhere within the business park. Once the stream was diverted into the storm sewer, and a RoW was registered over the sewer corridor, all authority over this section of the drainage system transferred to the Township of Langley.

Storm sewers are not considered to be fish habitat (even in cases where fish migrate through them) and setbacks do not apply. Senior environmental agencies have no role in the modification of storm sewers within their RoWs, including realignment of sewers in modified RoWs. Approvals are required from these agencies only when proposed works affect the inlets and outlets (i.e. where they connect to open streams); such works are not proposed by the development permit application.

The proposed works involve replacement of a section of the existing storm sewer with a new storm sewer on a different alignment, accommodating a building that had not been designed when the sewer was first installed. The new sewer will connect to an existing manhole at one end, and will connect at a new manhole at the other end. No work is proposed near open stream habitat. Notwithstanding, the work has been carefully planned and will be monitored to ensure that indirect impacts to downstream habitat do not occur.

In conclusion, we confirm that there is no stream on the subject property and that the Township of Langley is entirely within their jurisdiction to allow the realignment of the storm sewer

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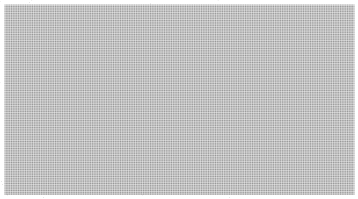
through the property. The works will be closely monitored to ensure no indirect impacts to downstream habitat.

Please call me should this require clarification.

Your truly,
ENVIROWEST CONSULTANTS INC.



s.19(1)

attach.

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ATTACHMENT A

ENVIROWEST DRAWING No. 655-55-01
DFO APPROVED DRAINAGE PLANS

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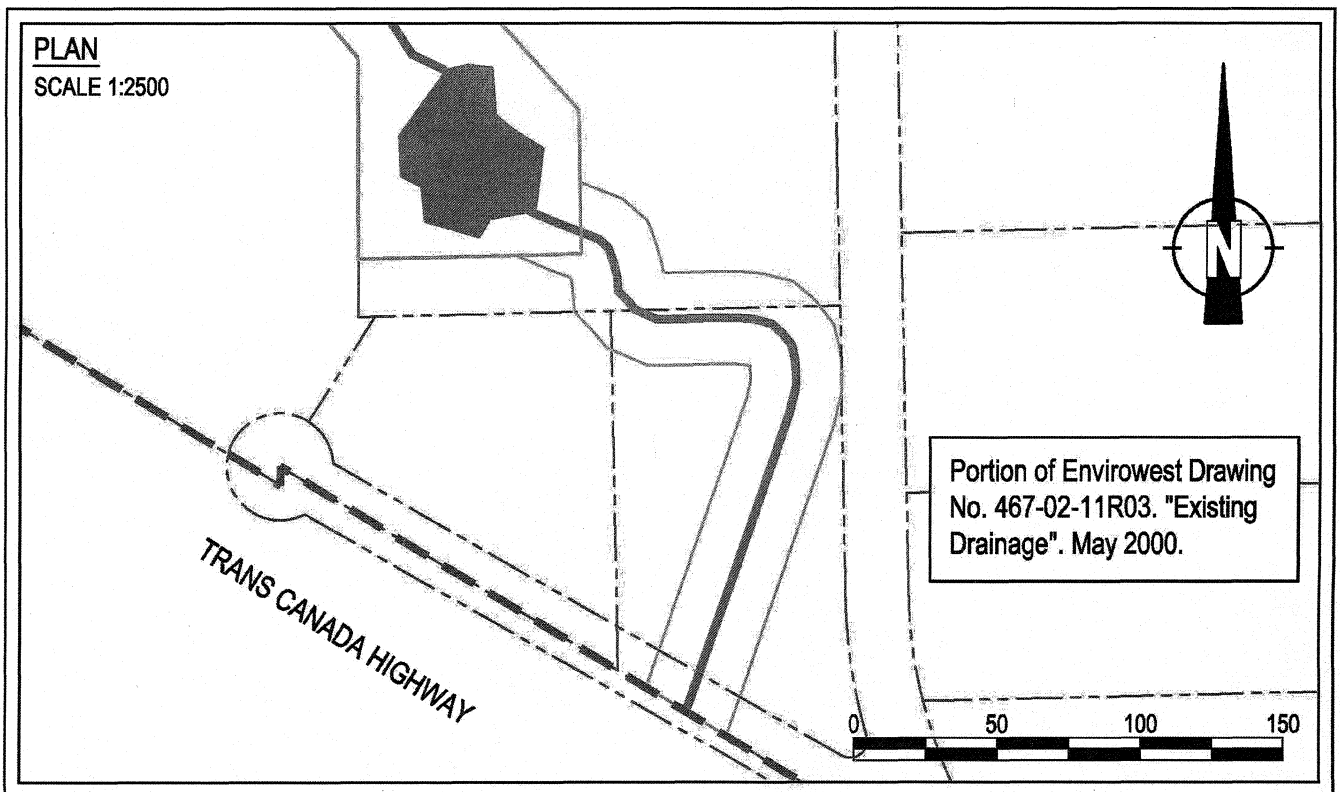

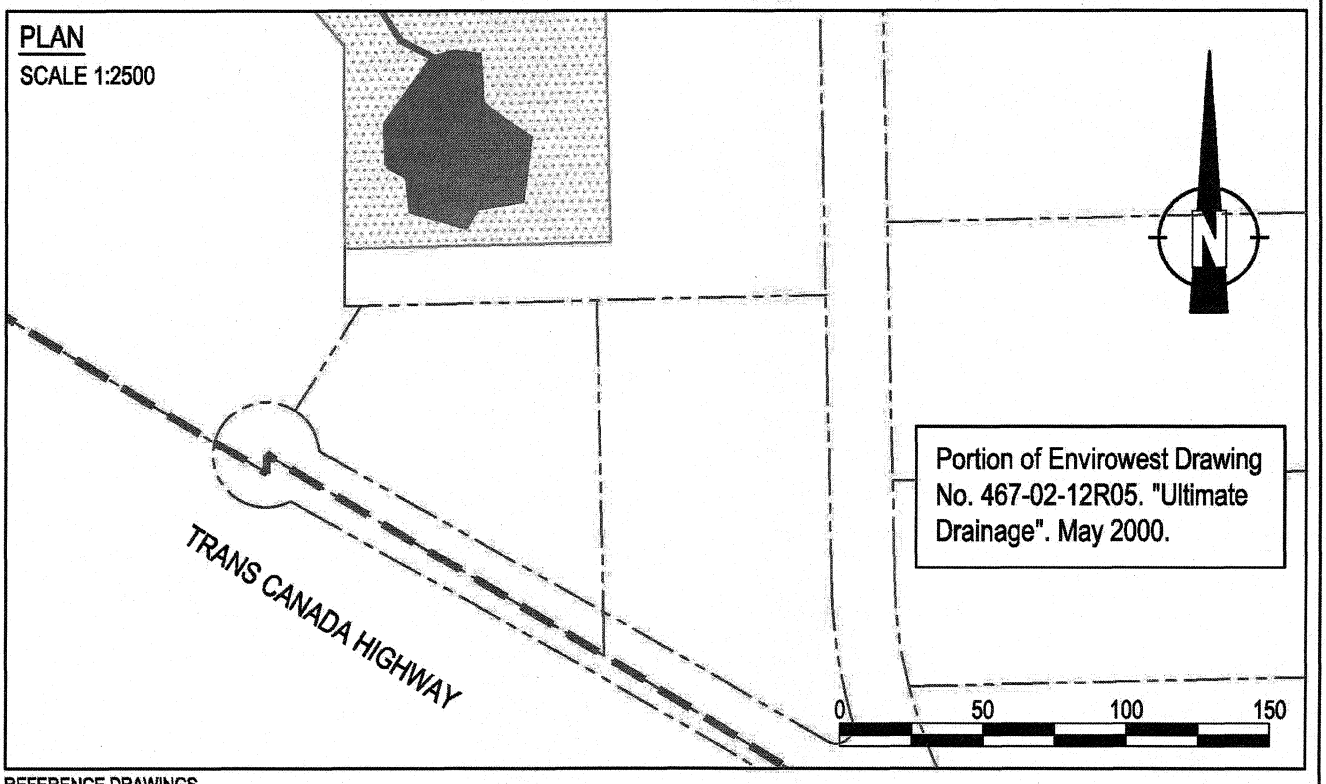

REFERENCE DRAWINGS

1. Drawing No. 467-02-11. Rev.03. "Existing Drainage". May 2000. Envirowest Consultants Inc.
2. Drawing No. 467-02-12. Rev.05. "Ultimate Drainage". May 2000. Envirowest Consultants Inc.

BEEDIE DEVELOPMENT GROUP
Burnaby, BC

GLOUCESTER INDUSTRIAL ESTATES
Langley, BC

envirowest consultants inc.
Suite 101 - 1515 Broadway Street
Port Coquitlam, British Columbia
Canada V3C 6M2
office: 604-944-0502
facsimile: 604-944-0507
www.envirowest.ca

DFO - APPROVED DRAINAGE PLANS

DESIGN:	DRAWN:	CHECKED:	REVISION:	REVISION DATE:
IWW	SCM	IWW	00	
SCALE: As Shown			DRAWING NUMBER: 655-55-01	
DATE: November 30, 2017				

DATE: 2017-11-30 - 10:11am
PATH: \\ENV-FS-R\Alpha\Envirowest Files\2017\Langley\655-55\AutoCAD\Final\655-55-01.dwg
LAYOUT: 655-55-01

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From: [redacted]
Sent: December-22-17 11:23 AM
To: Russo, Stephanie
Cc: Rotinsky, Brenda
Subject: West Creek
Attachments: Seifi Nov. 30, 2017.pdf; LEPS.pdf; DPA 100890.pdf

s.19(1)

Hi Stephanie,

The following statement has been drafted by the Langley Township Council in regards to the realignment of the existing storm sewer through the property located at 4825 – 275 Street.

THEREFORE BE IT RESOLVED THAT COUNCIL REQUEST THAT BEEDIE CORPORATION PROVIDE THE FOLLOWING:

1. BEEDIE CORPORATION AND/OR ITS QUALIFIED PROFESSIONAL CONFIRMS THAT THE LOCATION AND GENERAL DESIGN OF THE WORKS ARE CONSISTENT WITH THE INFORMATION ORIGINALLY PROVIDED TO THE DFO AND THAT ANY SUBSTANTIVE DEVIATIONS BE FORWARDED TO THEM FOR REVIEW PRIOR TO CURRENT AUTHORIZATION;

2. THAT THE DFO BE REQUESTED TO CONDUCT A SITE REVIEW IN ORDER TO DETERMINE THE NUMBER AND SPECIES OF FISH POTENTIALLY AFFECTED BY THE RE-LOCATION OF THE SRW;

3. THAT THE MINISTRY ENVIRONMENT BE CONSULTED FURTHER TO THE APPLICATION IN ORDER TO ASCERTAIN COMPLIANCE WITH ALL RELATED PROVINCIAL POLICIES FURTHER TO FISH AND RIPARIAN GUIDELINES AND LEGISLATION.

CARRIED

Attached are 3 items that may help understand what has gone on.

Please call once you've reviewed this info.

[redacted]
office: 604-944-0502 ext. [redacted]
cellular: [redacted]
facsimile: 604-944-0507
Suite 101 - 1515 Broadway Street
Port Coquitlam, British Columbia
Canada V3C 6M2
envirowest consultants inc.
www.envirowest.ca

Pages 603 to / à 607
are duplicates of
sont des duplicatas des
pages 597 to / à 601

Pages 608 to / à 609
are duplicates of
sont des duplicatas des
pages 580 to / à 581

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Township of Langley

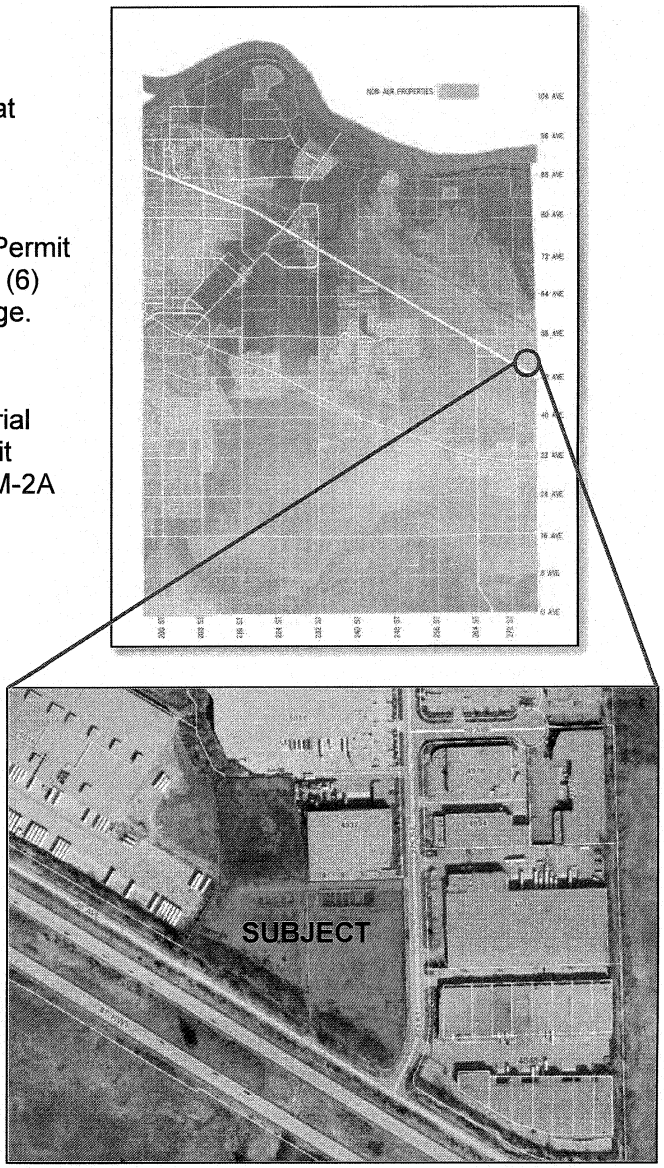
Est. 1873

REPORT TO MAYOR AND COUNCIL

PRESENTED:	NOVEMBER 6, 2017 – PUBLIC HEARING	**REPORT:**	17-114
FROM:	COMMUNITY DEVELOPMENT DIVISION	**FILE:**	14-05-0098
SUBJECT:	DEVELOPMENT PERMIT APPLICATION NO. 100890 (161884 CANADA INC. / BEEDIE DEVELOPMENT GROUP / 4825 - 275 STREET)		

PROPOSAL:

Development Permit application to facilitate the construction of a 9,835 m² (105,868 ft²) industrial building including accessory office space located at 4825 - 275 Street in Gloucester.



RECOMMENDATION SUMMARY:

That Council authorize issuance of Development Permit No. 100890 subject to nine (9) conditions, plus six (6) conditions to be applied at the Building Permit stage.

RATIONALE:

The proposal complies with the Gloucester Industrial Park Community Plan (and its Development Permit Guidelines) and with the site's General Industrial M-2A zoning.

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RECOMMENDATION:

That Council authorize issuance of Development Permit No. 100890 to 161884 Canada Inc. for property located at 4825 - 275 Street, subject to the following conditions:

a. Building plans being in compliance with Schedules "A" through "C"'
b. Landscape plans being in substantial compliance with Schedule "E" and in compliance with the Township's Street Tree and Boulevard Planting Policy to the acceptance of the Township;
c. All signage being in compliance with Schedules "C" and "D" and the Gloucester Development Permit Guidelines and the Township's Sign Bylaw;
d. Provision of a final tree management plan incorporating tree retention, replacement and protection details in compliance with the Township's Subdivision and Development Servicing Bylaw (Schedule I - Tree Protection), to the acceptance of the Township;
e. Rooftop mechanical equipment to be located so that it is not visible from adjacent roads or alternatively screened from view by compatible architectural treatments;
f. All outdoor storage areas being covered by a dust free surface;
g. All refuse areas to be located in an enclosure and screened to the acceptance of the Township;
h. All chain link fences being black vinyl with black posts and rails; and
i. Section 702A.5(a) – Siting of Buildings and Structures of the Township of Langley Zoning Bylaw 1987 No. 2500 being varied to reduce the minimum setback for a principal building from a front lot line in General Industrial Zone M-2A from 10 m (32.8 ft) to 5 m (16.4 ft).

Although not part of the Development Permit requirements, the applicant is advised that prior to issuance of a building permit the following items will need to be finalized:

a. Payment of supplemental Development Permit application fees and Building Permit administration fees.
b. Submission of a site specific on-site servicing and stormwater management plan in accordance with the Subdivision and Development Servicing Bylaw to the acceptance of the Township;
c. Provision of an exterior lighting impact plan prepared by an electrical engineer in compliance with the provisions of the Township's Exterior Lighting Impact Policy to the acceptance of the Township;
d. Submission of an Erosion and Sediment Control Plan or exemption in accordance with the Erosion and Sediment Control Bylaw, to the acceptance of the Township;
e. On-site landscaping being secured by a letter of credit at the Building Permit stage;
f. Modification of Statutory Right of Way BB184653 (Plan BCP 34343).

EXECUTIVE SUMMARY:

Beedie Development Group has applied for a Development Permit to construct a 9,835 m² (105,868 ft²) industrial building including accessory office space located at 4825 - 275 Street in the Gloucester industrial area. Staff are supportive of the development proposal as it conforms to the Development Permit Guidelines of the Gloucester Industrial Park Community Plan. Issuance of Development Permit No. 100890 is recommended subject to nine (9) conditions, plus six (6) conditions to be applied at the Building Permit stage.

PURPOSE:

The purpose of this report is to provide information and recommendations concerning proposed Development Permit No. 100890 for property located at 4825 - 275 Street in the Gloucester industrial area.

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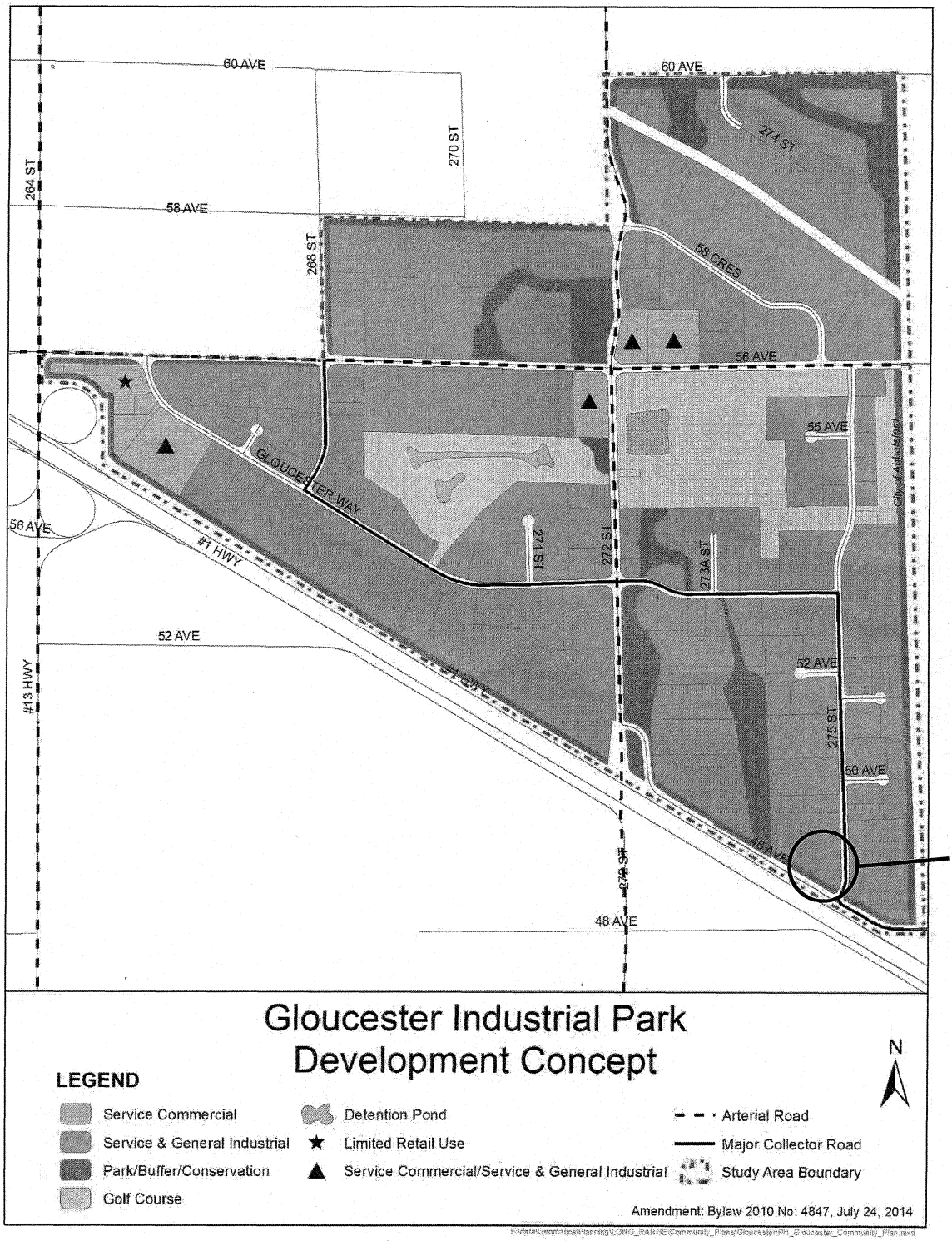
DEVELOPMENT PERMIT APPLICATION NO. 100890
(161884 CANADA INC. / BEEDIE DEVELOPMENT GROUP / 4825 - 275 STREET)
Page 3 . . .



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DEVELOPMENT PERMIT APPLICATION NO. 100890
(161884 CANADA INC. / BEEDIE DEVELOPMENT GROUP / 4825 - 275 STREET)
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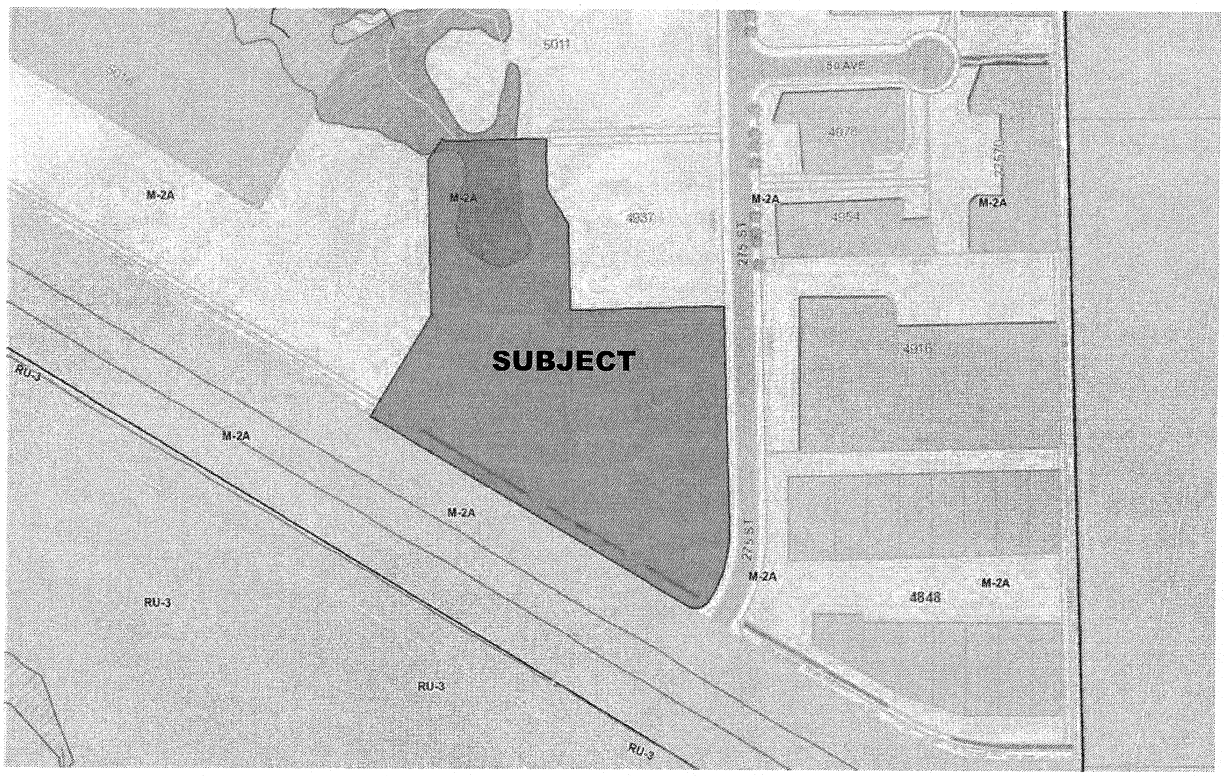

ZONING BYLAW NO. 2500

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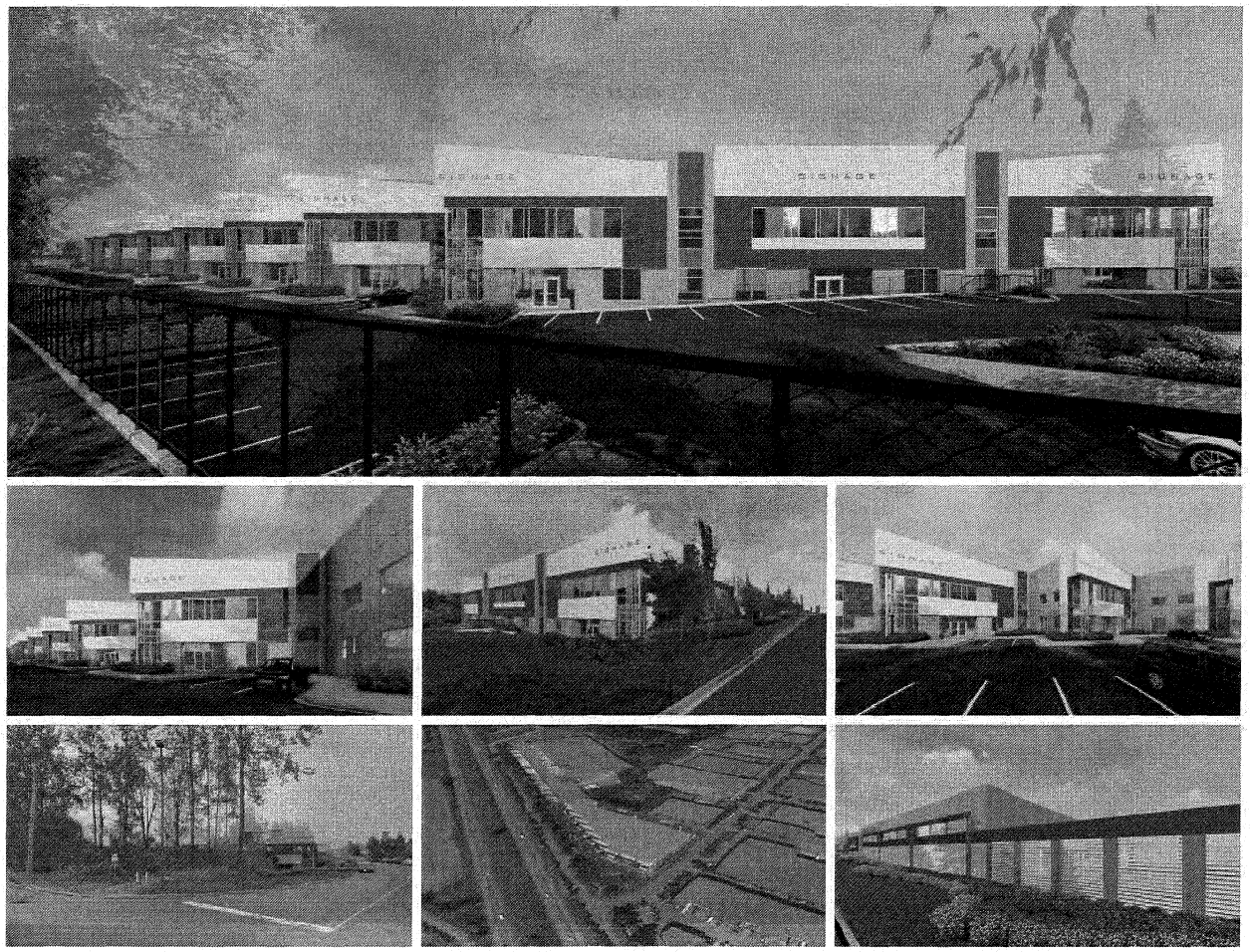
DEVELOPMENT PERMIT APPLICATION NO. 100890
(161884 CANADA INC. / BEEDIE DEVELOPMENT GROUP / 4825 - 275 STREET)
Page 5 . . .



RENDERINGS - SUBMITTED BY APPLICANT

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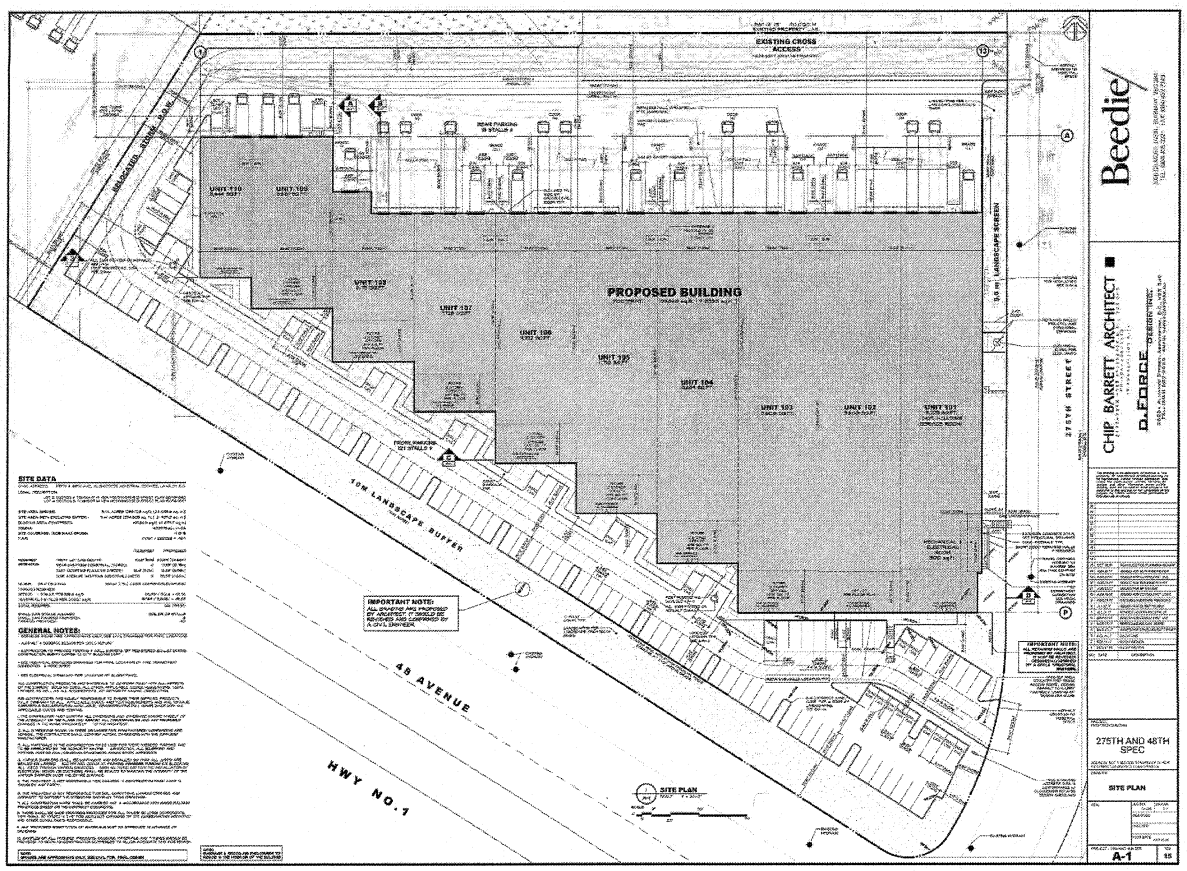
DEVELOPMENT PERMIT APPLICATION NO. 100890
(161884 CANADA INC. / BEEDIE DEVELOPMENT GROUP / 4825 - 275 STREET)
Page 6 . . .



SITE PLAN – SUBMITTED BY APPLICANT

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REFERENCE:

Owner:	161884 Canada Inc. 3030 Gilmore Diversion Burnaby, BC V5G 3B4
Agent:	Beedie Development Group 3030 Gilmore Diversion Burnaby, BC V5G 3B4
Legal Description:	Lot 1 Section 5 Township 14 New Westminster District Plan EPP70774
Location:	4825 - 275 Street
Area:	3.16 ha (7.8 ac)
Gloucester Industrial Park Plan:	Service and General Industrial
Existing Zoning:	General Industrial Zone M-2A

BACKGROUND/HISTORY:

The subject site is designated Service and General Industrial in the Gloucester Industrial Park Community Plan. The subject site was rezoned to General Industrial Zone M-2A as part of two rezoning applications in 2007 (RZ100240 and RZ100246). The applicant created the subject site by consolidating two parcels.

The applicant has applied for a Development Permit to construct a 9,835 m² (105,868 ft²) multi tenant industrial building with accessory office space.

As the subject site is designated a mandatory Development Permit area in the Gloucester Industrial Park Community Plan, Council is provided the opportunity to review the form, character and siting of the proposed development. Issuance of a Development Permit is required prior to issuance of a Building Permit.

DISCUSSION / ANALYSIS:

The subject site is zoned General Industrial Zone M-2A and designated Service and General Industrial in the Gloucester Industrial Park Community Plan. As part of the application, the applicant has proposed to relocate an existing Statutory Right of Way and storm sewer. The north portion of the site includes a biofiltration/detention pond constructed in 2007 as part of the overall DFO compensation for the Gloucester Industrial Park. A non-disturbance restrictive covenant was registered on the property in 2008 to protect the pond. The subject development permit must comply with the terms and conditions of the restrictive covenant.

In accordance with Council's policy, a site plan, building elevations and a landscape plan have been submitted detailing the proposed development's form, character and siting. Proposed Development Permit No. 100890 is attached as Attachment A to this report. Development Permit guidelines relevant to the site are contained in the Gloucester Industrial Park Community Plan (see Attachment B).

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Adjacent Uses:

North:	Industrial properties designated "Service & General Industrial" in the Gloucester Industrial Park Community Plan (zoned General Industrial Zone M-2A);
South:	48 Avenue, beyond which is Highway No. 1;
East:	275 Street, beyond which are industrial properties designated "Service & General Industrial" in the Gloucester Industrial Park Community Plan and zoned General Industrial Zone M-2A; and
West:	Industrial property designated "Park/Buffer/Conservation" and "Service & General Industrial" in the Gloucester Industrial Park Community Plan (zoned General Industrial Zone M-2A).

Development Permit:

The applicant proposes a multi-tenant industrial building with accessory office space located on the southeasterly portion of the site, with parking proposed on the south and west sides of the building and loading proposed on the north side of the building.

Exterior finishing of the building consists largely of tilt up concrete walls, with cast-in reveal lines, painted light grey with contrasting dark grey and white accents. The south elevation of the building is visually enhanced by the articulation of the individual unit entrances consistent with the alignment of 48 Avenue as well as the incorporation of slanted rooflines. The south elevation also features storefront and spandrel glazing.

Twenty seven (27) loading bay doors (proposed on the north building elevation) will be screened from 275 Street by a screen wall finished in longboard siding, as well as landscaping.

As a condition of the Development Permit, refuse bins are to be located in an enclosure and screened to the acceptance of the Township. As the roof of the building will be visible from the east, a condition of the Development Permit has been included requiring the screening of rooftop mechanical equipment.

Access and Parking:

Access to the site is proposed to be provided by two (2) driveways accessed from 275 Street. The northern driveway will be used by trucks accessing the loading area. The southern driveway will be used by employees and visitors.

A total of 140 parking spaces are proposed (140 required) for the development, including 21 small car spaces. The Township's Zoning Bylaw permits a maximum of 20% of parking spaces to be designated small car parking. The proposed parking complies with the requirements of the Township's Zoning Bylaw.

Proposed Siting Variance:

The subject site abuts 48 Avenue and 275 Street. When a lot has two lot lines which abut a street, the Township's Zoning Bylaw defines the front lot line as the lot line with the shorter distance. In the case of the subject site, the lot line abutting 275 Street is the front lot line as it is shorter than the lot line abutting 48 Avenue. The applicant has applied to vary the required front lot line setback (along 275 Street) from 10 m (32.8 ft) to 5 m (16.4 ft). The applicant has provided the following rationale for the proposed variance:

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Based on the unique site configuration including: the existing 10m landscape buffer area to the south, driveway access limited to the east, grading constraints and a cross access easement which necessitates loading on the north, we believe a setback variance facilitates this design. In addition, to emphasize the feature building corner and its positive impact on the streetscape of this corner site, the design anchors the building close to the corner and removes parking from the streetscape and public realm. This provides additional visual interest and facilitates additional screening from vehicle parking.

Staff are supportive of this proposed building setback variance as it permits a functional and attractively designed building to be sited closer to the street and contributes to the overall streetscape. Staff note that due to lot orientation of properties to the north, there are several other existing buildings in the area which are sited less than 10 m (32.8 ft) from 275 Street.

Exterior Lighting Impact Policy:

As the subject site is located within 150 m (492 ft) of land designated for rural residential purposes, compliance with the Township's Exterior Lighting Policy is required. Provision of an exterior lighting impact plan prepared by an electrical engineer to the acceptance of the Township is required prior to the issuance of a Building Permit.

Signage:

The building elevation plans include ten (10) fascia signs located on the south elevation. One (1) freestanding sign is proposed on the southeast portion of the property. All signage is required to comply with the Township's Sign Bylaw, Development Permit Guidelines of the Gloucester Industrial Park Community Plan (Attachment B), the Township's Sign Bylaw and Schedules "C" and "D" of proposed Development Permit No. 100890.

Servicing:

Full urban services exist to the subject site. As a condition of Building Permit, a site-specific on-site servicing plan and storm water management plan, in accordance with the Township's Subdivision and Development Servicing Bylaw to the acceptance of the Township is required. Additionally, an Erosion and Sediment Control Permit or exemption will be required in accordance with the Erosion and Sediment Control Bylaw, to the acceptance of the Township.

Tree Protection:

Fifteen (15) significant trees were identified on the site. No trees are proposed to be retained. As part of the Development Permit application, the applicant proposes to provide 163 replacement trees, as required by the Subdivision and Development Servicing Bylaw (Schedule I – Tree Protection). Final tree replacement plans are subject to the final acceptance of the Township.

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Buffer:

The Gloucester Industrial Park Plan indicates a 15 m (49.2 ft) natural landscape buffer/screen adjacent to Highway No. 1. This item was fulfilled in conjunction with previous rezoning applications of the subject site (RZ100240 and RZ100246). As 48 Avenue parallels Highway No. 1, the applicant proposed a 10 m (32.8 ft) on-site buffer north of 48 Avenue plus an additional row of coniferous trees to be planted on the road right-of-way between 48 Avenue and Highway No. 1 that was secured as a condition of previous rezoning. The subject application maintains the 10 m (32.8 ft) wide on-site buffer on the southerly portion of the site.

Landscaping:

In accordance with the Zoning Bylaw, the 275 Street frontage includes a 5 m (16.4 ft) landscaping buffer consisting of trees and shrubs. The north and west lot lines include the provision of 3 m (9.8 ft) in depth landscaping buffers consisting of groundcover, shrubs and trees. Additional landscaping, including cedar and cypress trees, is proposed on the northeast portion of the site to further screen the loading area in accordance with the Gloucester Industrial Park Plan. Additional landscaping, including cherry and dogwood trees, is provided at the south access to the site to mark and enhance the entrance. Each individual unit entrance includes planting areas with shrubs, maple and dogwood trees.

Environmental Considerations:

The Township's Sustainability Charter includes environmental objectives to protect and enhance rivers, streams, wildlife habitats and environmentally sensitive areas in the Township. These environmental objectives are supported by policy and guidance outlined in the Township's Environmentally Sensitive Areas Study, Wildlife Habitat Conservation Strategy, Schedule 3 of the OCP, Erosion and Sediment Control Bylaw, and Subdivision and Development Servicing Bylaw (Schedule I – Tree Protection) which promote sound environmental management practices and outline Township environmental performance expectations. Full urban services exist to the subject site. The provision of stormwater management and sediment control measures and compliance with the Township's Subdivision and Development Servicing Bylaw (Schedule I – Tree Protection) satisfies the objectives of the Sustainability Charter.

Public Information Meeting:

Given the application's consistency with the Gloucester Industrial Park Community Plan and the presence of existing buildings to the north with setbacks from 275 Street less than 10 m (32.8 ft), the requirement for the applicant to hold a public information meeting pursuant to Section 3.1 of the Developer Held Public Information Meeting Policy has been waived. Staff note that an opportunity for public input is provided through the notification mail-outs to adjacent property owners / occupants consistent with Township bylaws.

POLICY CONSIDERATIONS:

The proposed development complies with the site's Servicing and General Industrial designation in the Gloucester Industrial Park Community Plan, and the existing General Industrial Zone M-2A requirements (with the exception of the siting variance which has been incorporated in the proposed Development Permit). The proposal, in staff's opinion, is in compliance with the Development Permit Guidelines of the Gloucester Industrial Park Community Plan (Attachment B).

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Staff have notified adjacent property owners that this Development Permit application is being considered at the November 6, 2017 meeting, and they may attend and speak to the matter should they deem it necessary.

Respectfully submitted,

Joel Nagtegaal
DEVELOPMENT PLANNER
for
COMMUNITY DEVELOPMENT DIVISION

ATTACHMENT A	Development Permit No. 100890: SCHEDULE A – Renderings SCHEDULE B – Site Plan SCHEDULE C – Building Elevations SCHEDULE D – Signage Plan SCHEDULE E – Landscape Plan
ATTACHMENT B	Gloucester Industrial Park Community Plan – Development Permit Guidelines

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ATTACHMENT A

THE CORPORATION OF THE TOWNSHIP OF LANGLEY

Development Permit No. 100890

This Permit is issued this _____day of _____, 2017 to:

1. Name: 161884 Canada Inc.

   Address: 3030 Gilmore Diversion
   Burnaby, BC V5G 3B4

2. This permit applies to and only to those lands within the Municipality described as follows and to any and all buildings, structures and other development thereon:

   LEGAL DESCRIPTION: Lot 1 Section 5 Township 14 New Westminster District Plan EPP70774

   CIVIC ADDRESS: 4825 - 275 Street

3. This Permit is issued subject to compliance with all of the Bylaws of the Municipality of Langley applicable thereto, except as specifically varied or supplemented by this permit as follows:

   a. Building plans being in compliance with Schedules "A" through "C"'
   b. Landscape plans being in substantial compliance with Schedule "E" and in compliance with the Township's Street Tree and Boulevard Planting Policy to the acceptance of the Township;
   c. All signage being in compliance with Schedules "C" and "D" and the Gloucester Development Permit Guidelines and the Township's Sign Bylaw;
   d. Provision of a final tree management plan incorporating tree retention, replacement and protection details in compliance with the Township's Subdivision and Development Servicing Bylaw (Schedule I - Tree Protection), to the acceptance of the Township;
   e. Rooftop mechanical equipment to be located so that it is not visible from adjacent roads or alternatively screened from view by compatible architectural treatments;
   f. All outdoor storage areas being covered by a dust free surface;
   g. All refuse areas to be located in an enclosure and screened to the acceptance of the Township;
   h. All chain link fences being black vinyl with black posts and rails; and
   i. Section 702A.5(a) – Siting of Buildings and Structures of the Township of Langley Zoning Bylaw 1987 No. 2500 being varied to reduce the minimum setback for a principal building from a front lot line in General Industrial Zone M-2A from 10 m (32.8 ft) to 5 m (16.4 ft).

   Although not part of the Development Permit requirements, the applicant is advised that prior to issuance of a building permit the following items will need to be finalized:

   a. Payment of supplemental Development Permit application fees and Building Permit administration fees.
   b. Submission of a site specific on-site servicing and stormwater management plan in accordance with the Subdivision and Development Servicing Bylaw to the acceptance of the Township;

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c. Provision of an exterior lighting impact plan prepared by an electrical engineer in compliance with the provisions of the Township's Exterior Lighting Impact Policy to the acceptance of the Township;
d. Submission of an Erosion and Sediment Control Plan or exemption in accordance with the Erosion and Sediment Control Bylaw, to the acceptance of the Township;
e. On-site landscaping being secured by a letter of credit at the Building Permit stage.
f. Modification of Statutory Right of Way BB184653 (Plan BCP34343).

4. The land described herein shall be developed strictly in accordance with the terms, conditions and provisions of this Permit and any plans and specifications attached as a Schedule to this Permit which shall form a part hereof.

   This Permit is not a Building Permit.

   All developments forming part of this Development Permit shall be substantially commenced within two years after the date the Development Permit is issued.

   This permit shall have the force and effect of a restrictive covenant running with the land and shall come into force on the date of an authorizing resolution passed by Council.

   It is understood and agreed that the Municipality has made no representations, covenants, warranties, guarantees, promises or agreement (verbal or otherwise) with the developer other than those in this Permit.

   This Permit shall enure to the benefit of and be binding upon the parties hereto and their respective heirs, executors, administrators, successors and assigns.

AUTHORIZING RESOLUTION PASSED BY COUNCIL THIS ____ DAY OF _____, 2017.

Attachments:

SCHEDULE A	Renderings
SCHEDULE B	Site Plan
SCHEDULE C	Building Elevations
SCHEDULE D	Signage Plan
SCHEDULE E	Landscape Plan

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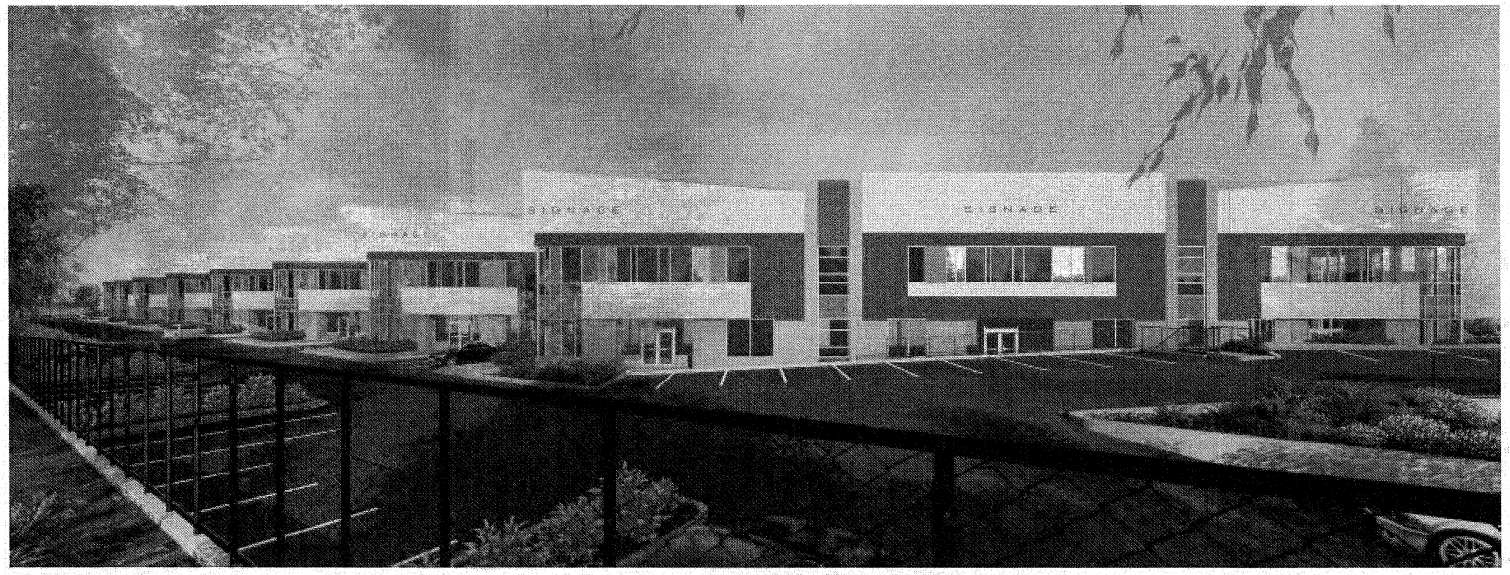

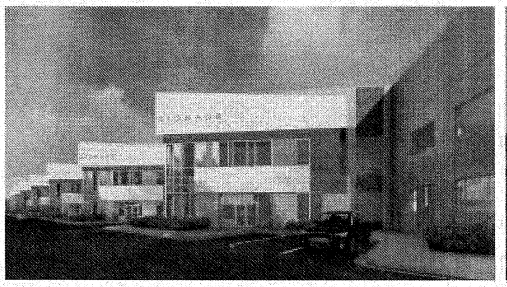

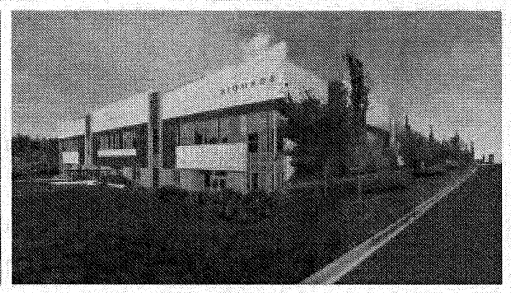

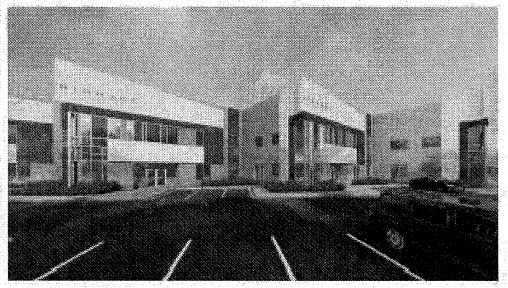

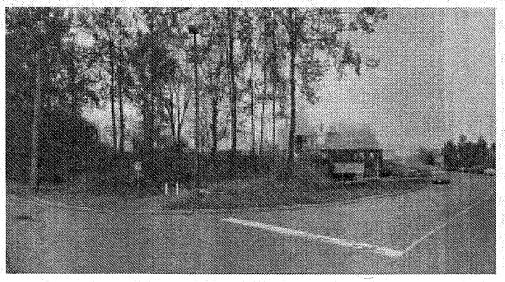

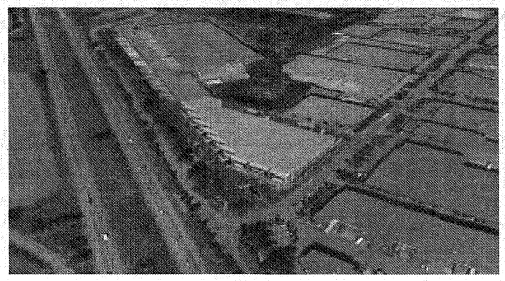

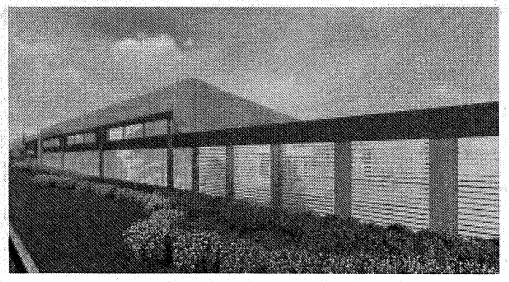

Township of Langley
Est. 1873

SCHEDULE A
RENDERINGS

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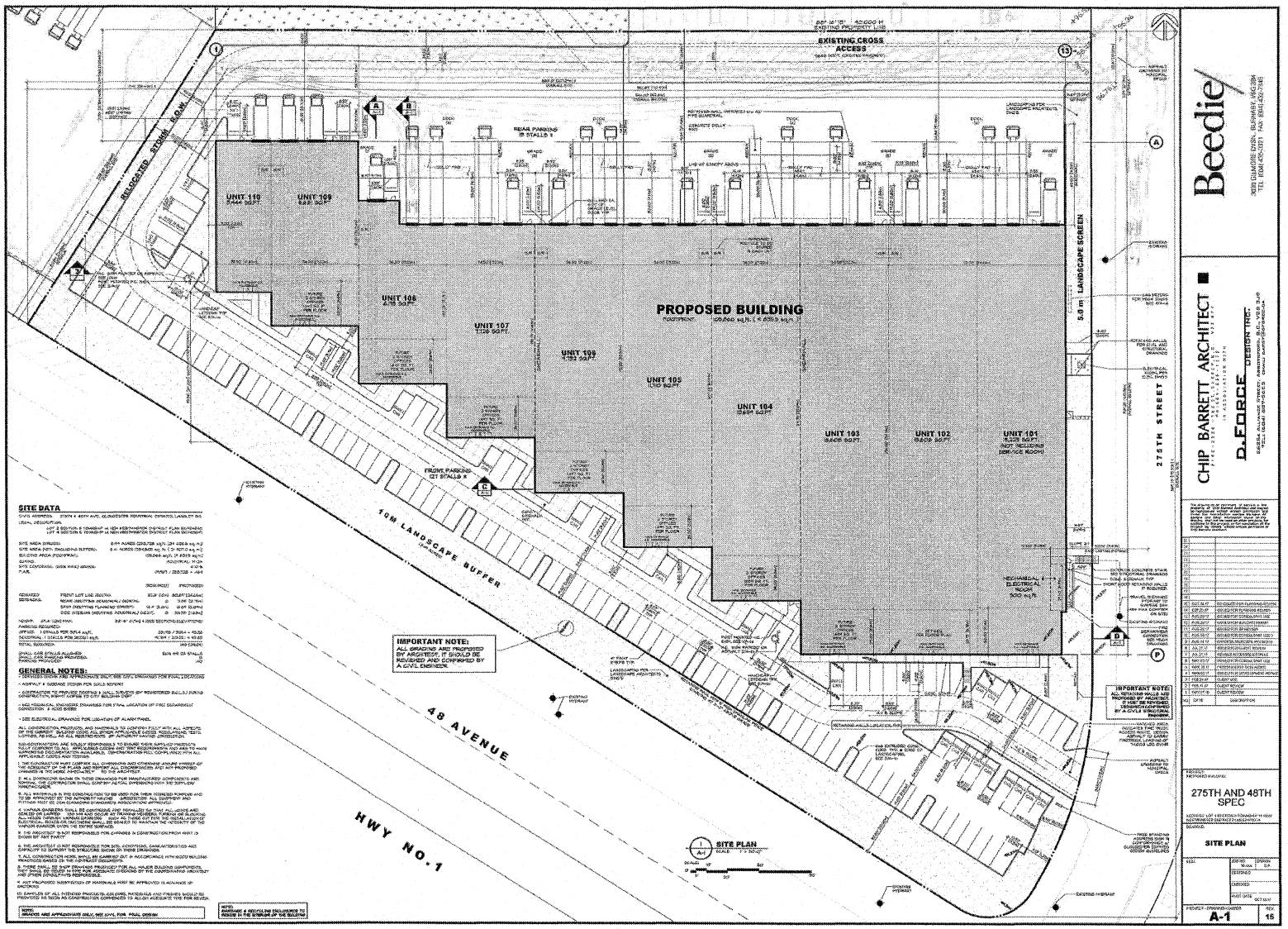

SCHEDULE B
SITE PLAN

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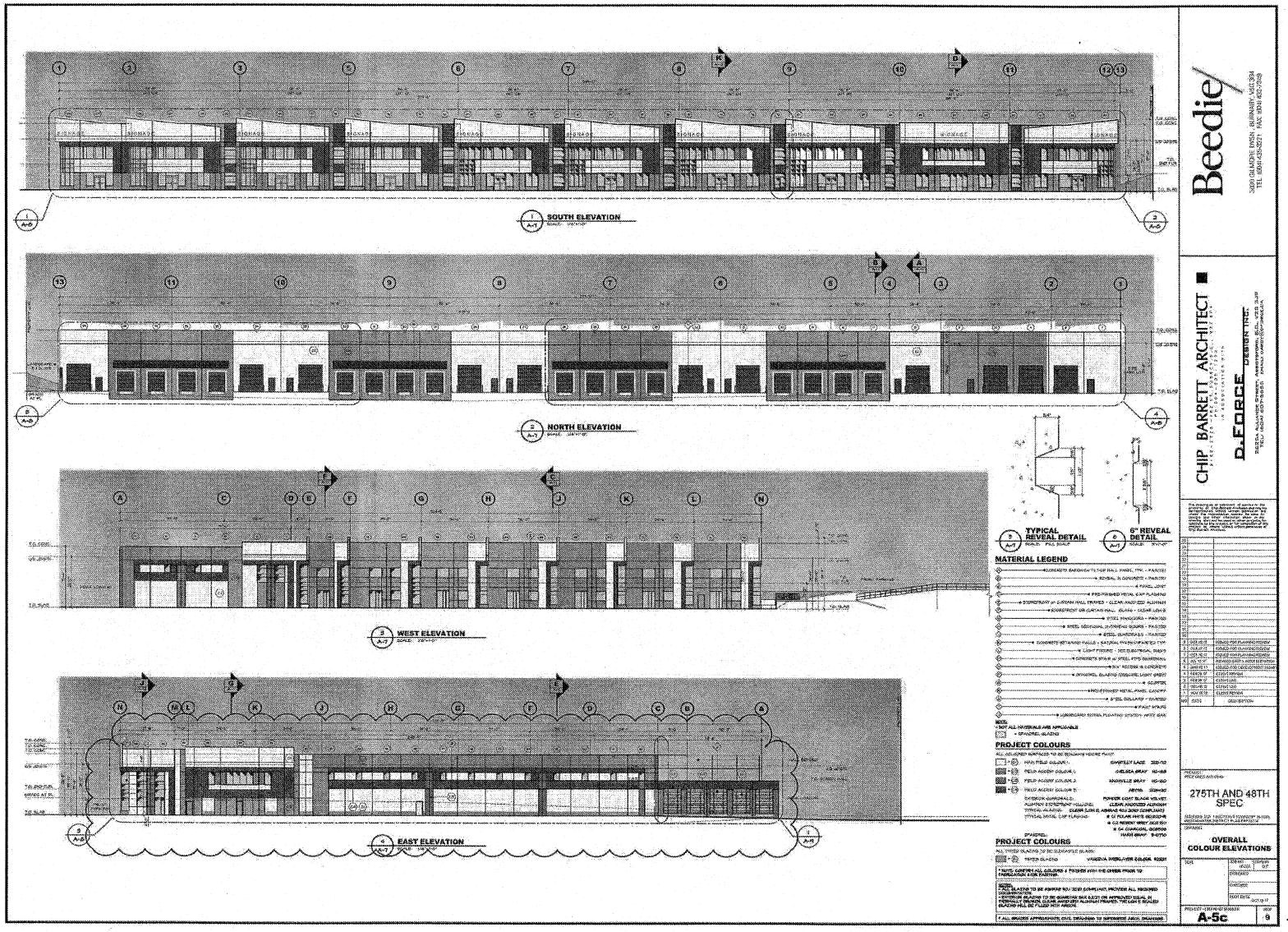

SCHEDULE C
BUILDING ELEVATIONS

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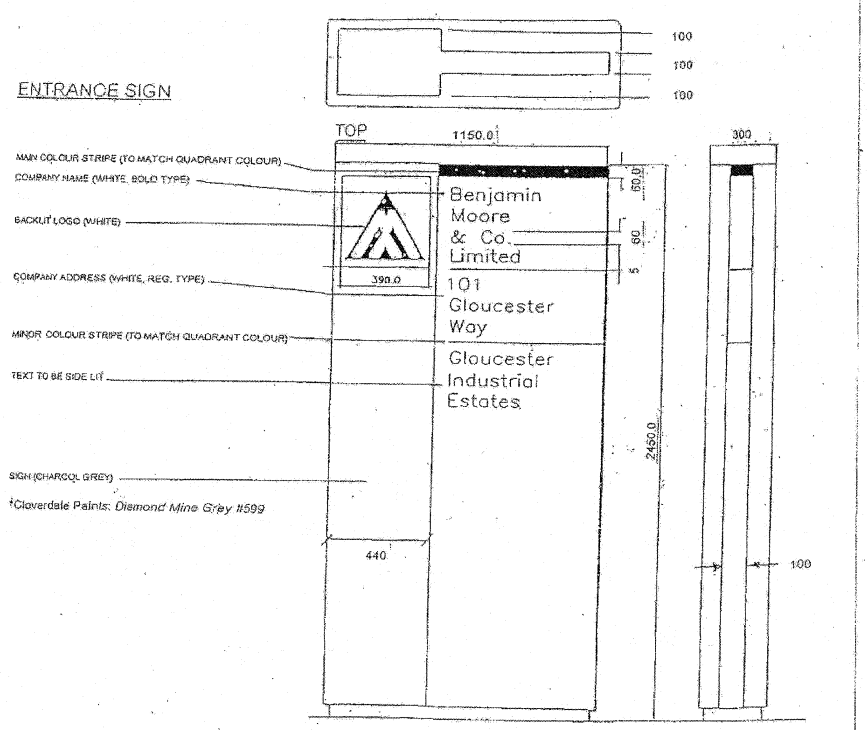
GLOUCESTER INDUSTRIAL ESTATES

ENTRANCE SIGN



QUADRANT COLOUR
S.W. RED
N.W. YELLOW
S.E. BLUE
N.E GREEN

Township of Langley
Est. 1873

SCHEDULE D
SIGNAGE PLAN

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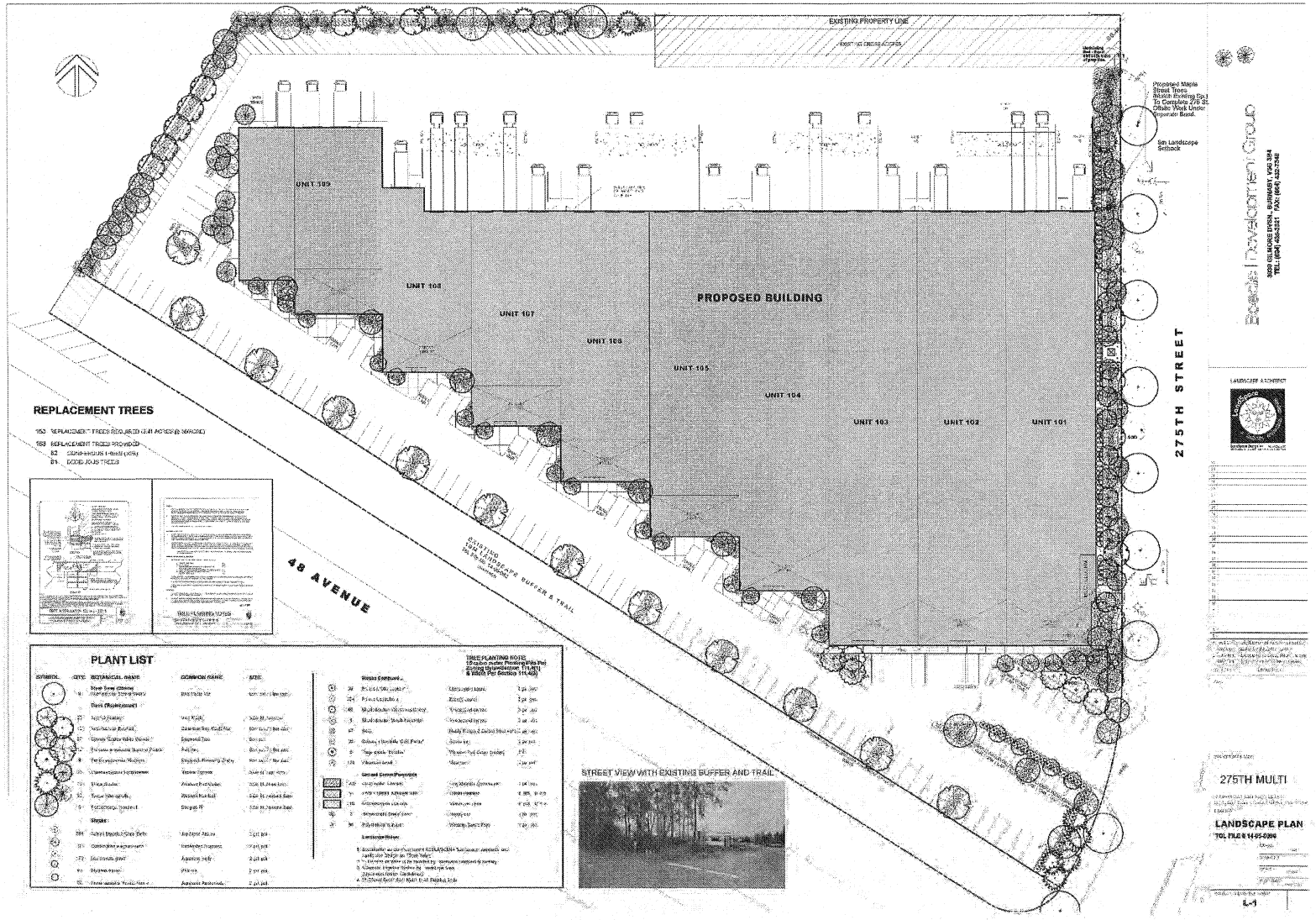

SCHEDULE E
LANDSCAPE PLAN

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3.0 DEVELOPMENT STRATEGY

There is no need for the Township Of Langley to consider expansion of services to the subject area to permit industrial development. Development of services to the areas and consideration of zoning of properties in the area to industrial and commercial uses will only be considered on the basis of a comprehensive development for the subject lands. The Township Of Langley will not be developing capital expenditure programs for the subject area and considers the area unsuitable for industrial and commercial uses until municipal water and sewage systems are developed and a program to upgrade the drainage system, roadways and park requirements is proposed and adopted. Development of services will only proceed on the property owners request and agreement to pay the cost of developing services.

4.0 DEVELOPMENT PERMIT GUIDELINES

#2812
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In a Development Permit Area, before a building permit may be obtained, a Development Permit must first be issued by Council. Council may set forth conditions under which development may take place that may be in addition to normal zoning requirements and the developer's Statutory Building Scheme registered as a charge against the lands pursuant to Section 216(1) of the Land Title Act.

Form and Character

- Building design, materials and exterior finish and landscaping shall support the creation of an attractive, high quality estate industrial environment and shall conform to the provisions of Gloucester's Statutory Building Scheme;
- Low profile building designs are encouraged, particularly adjacent to residential and rural areas as well as the No. 1 Highway;
- Commercial buildings are encouraged to incorporate "pitched" roofs or other similar roof treatment into the building design;
- The use of smooth surfaced, light coloured building materials, finished, painted "tilt-up" concrete panels, acrylic stucco, brick, baked enamel finished metal siding, or metal panels is encouraged;
- The use of untreated or unfinished concrete, metal or aluminum as a final building finish will not be permitted;
- Building design, layout, siting, landscaping, screening and buffering shall reflect the need to reduce noise impacts from the No. 1 Highway and between industrial development and adjacent uses;
- Buildings on corner sites or on lots backing onto roads shall be designed to recognize the building's visibility from more than one street with continuity of design, materials, exterior finish, signage and landscaping;
- Roof top mechanical equipment shall be hidden behind screens designed as an integral part of a building, or parapets may be extended to conceal such equipment;

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- Underground utilities shall be provided;
- Building plans submitted in support of a Development Permit shall:
    - Be of sufficient detail to convey the intent of the design in terms of the building's appearance, exterior finish, materials and colour treatments;
    - Be prepared by an architect registered in B.C.;
    - Include a coloured rendering or perspective drawing and typical building elevations;
    - Include a coloured site plan indicating the siting of all buildings and structures, property lines, dimensions, easements, rights of way, roads, areas, phasing and significant physical features;
    - Include a detailed statement of land and building uses, lot sizes, coverage, building height, staging and the location and dimensions of landscape and buffer areas.

Landscape Areas and Buffers

Landscape plans submitted in support of a Development Permit shall:

- Be of sufficient detail to convey the intent of the landscape design;
- Complement the objective of creating an attractive, high quality industrial environment;
- Comply with the Landscape Design Guidelines attached as Appendix "A" to the developer's Statutory Building Scheme;
- Be prepared by a landscape architect registered in B.C.;
- Include a detailed plant list, quantity and sizing of plant material;
- Include fencing design, material and specifications;
- Include a cost estimate of the value of the landscape works including fencing and installation (of both the landscape works and fencing);
- Include boulevard treatment and street tree plantings in accordance with the Township's Boulevard Treatment and Street Tree Policy;
- At the building permit stage, be secured by a letter of credit;
- In buffer and building setback areas on-site natural vegetation shall be encouraged to be retained wherever practical;

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- No site development works involving the removal of natural vegetation in the buffer or setback areas shall take place until after the Development Permit has been issued;

- Natural vegetation or berming adjacent to the No. 1 Highway shall not be removed unless specifically authorized by the Development Permit;

- The width of the undisturbed natural vegetation area adjacent to the No. 1 Highway shall be a minimum of 15m except where lands are designated for Service Commercial purposes the width of the required landscaping adjacent to the No. 1 Highway shall be a minimum of 7.5m;

#3850
19/07/99

- Adjacent to the No. 1 Highway, where no natural vegetation exists or where natural vegetation is specifically authorized to be removed by the Development Permit, it shall be replaced by a combination of landscape works and berming;

- Berms, where required, shall be a minimum of 1.8m height and be landscaped with evergreen shrubs/hedges and other plantings forming a continuous opaque screen;

- Adjacent to the street (other than the No. 1 Highway) a minimum 5m wide landscape area is required;

- Adjacent to residential or rural areas, a minimum 10m wide landscape area/buffer is required, plus a 1.8m high (minimum) fence designed to reduce the visual and noise impacts of the industrial use on adjacent lands;

- Parking areas are to be landscaped and shall not occupy more than 25% of the front yard of a building;

- Outside storage areas are to be screened; and

- Refuse collection areas shall be enclosed within a building or screened by a combination of walls, fencing and landscaping.

Signs

Sign plans submitted in support of the Development Permit application shall:

- Be in accordance with the developer's Statutory Building Scheme and the Township's Sign Control Bylaw;

- Be prepared by a professional graphic designer showing the location, type, size, colour and height of all signs, logos, graphics, symbols and colours to be located on all buildings and on free-standing signs;

- Complement the building's design scheme;

- Involve only one free-standing sign containing only the corporate names and street numbers on its face;

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- No illuminated sign creating a glare or reflection on any building or street shall be permitted;

- Signs shall only identify those businesses located within the building itself.

Conservation Areas

Creek and gully areas should be retained in private ownership and developed to ensure definition and protection of sensitive areas. These creek and gully areas are undevelopable and should be protected to serve as drainage courses, fish and wildlife habitats and to ensure development does not occur in areas of unstable soil conditions. Creek and gully areas should not be cleared and development should be set back from the top of the bank. Site specific study is required to determine the setback.

Technical Report No. 807 entitled "Guidelines for Land Development and Protection of the Aquatic Environment" prepared by the Department of Fisheries and Oceans Canada, July 1978, is to be used as a guideline for determining setbacks for development adjacent to fish bearing streams. The Township may require the property owner to have prepared a report certified by a professional geotechnical or Civil Engineer to assist in determining what conditions of development are required to protect development from hazardous conditions.

COMPENSATION HABITAT BUDGET

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ON-SITE HABITAT BUDGET

ON-SITE HABITATS: PRE-DEVELOPMENT				ON-SITE HABITATS: POST-DEVELOPMENT			
Habitat Type	Area (m^2)	Habitat Rating	EHA (m^2)	Habitat Type	Area (m^2)	Habitat Rating	EHA (m^2)
Riparian - moderate prod. (salmonids d/s)	7,650.0	0.10	765.0	Riparian - high prod. (salmonids d/s)	1,200.0	0.12	144.0
Channel - rearing (salmonids d/s) low prod.	127.5	0.40	51.0	Pond/Wetland	600.0	0.50	300.0
Beyond Setback	822.5	0.00	0.0	Beyond setback	6,800.0	0.00	0.0
Total Area (m^2) = A	8,600.0	EHA (m^2) = B	816.0	Total Area (m^2) = C	8,600.0	EHA (m^2) = D	444.0

Net On-site Habitat Loss, EHA in m^2 (Off-site compensation required if positive)	B-D	372.0

OFF-SITE HABITAT BUDGET

OFF-SITE HABITATS: PRE-DEVELOPMENT				OFF-SITE HABITATS: POST-DEVELOPMENT			
Habitat Type	Area (m^2)	Habitat Rating	EHA (m^2)	Habitat Type	Area (m^2)	Habitat Rating	EHA (m^2)
Spawning (moderate prod), fish access to culvert	450.0	0.90	405.0	Spawning (high prod), fish access to culvert	450.0	1.00	450.0
Eroding bank, fish access to culvert	100.0	0.00	0.0	improved bank, fish access to culvert	100.0	0.20	20.0
Riparian (low prod) fish accessible to culvert	1,500.0	0.05	75.0	Riparian (high prod) fish accessible to culvert	1,500.0	0.18	270.0
Spawning (high prod), no access	3000.0	0.90	2,700.0	Spawning (high prod), access	3,000.0	1.00	3000.0
Total Area (m^2) = E	5,050.0	EHA (m^2) = F	3,180.0	Total Area (m^2) = G	5,050.0	EHA (m^2) = H	3,740.0

Net Off-site Habitat Gain, EHA in m^2 (must equal or exceed Net On-site Habitat Loss):	H-F	560.0

Required compensation: 372.0 m^2	Excess gain: 188.0 m^2