



May 27, 2016

Mr. Carl Purvis, MCIP, RPP
Principal Planner – Urban Enabled Applications
Planning and Development
Halifax Regional Municipality

Dear Mr. Purvis,

Re: Environmental Management Plan Notes
C&D Waste Transfer Station Application – 130 Mann Street, Bedford, NS

The following site-specific environmental management requirements and best management practices (BMPs) have been developed for the C&D Waste Transfer Station Application currently proposed for the 130 Mann Street site in Bedford, NS (PID 40749814). These measures will be implemented at the site to mitigate the potential impact of facility operations on the surrounding environment. Site layout and environmental protection features are indicated on Drawing 1, attached.

- All site work shall be performed in accordance with the acceptable procedures outlined in the current version of the "Guidelines for the Siting and Operation of Waste Transfer Stations", as well as the "Erosion and Sedimentation Control Handbook for Construction Sites", both issued by NS Environment. All work performed at the site shall also be in conformance with the applicable Federal, Provincial, and Municipal laws and regulations, including but not limited to the Nova Scotia Environment Act, the Canadian Environmental Protection Act, Canadian Council of Ministers of the Environment guidelines, the Fisheries Act, and the Halifax Regional Municipality (HRM) legislation and bylaws (i.e. HRM By-Law L-200).
- The Site Owner and/or Operator performing the work are responsible for the protection of natural water bodies and groundwater from runoff originating from the site, and shall ensure that water containing parameter concentrations exceeding applicable discharge criteria does not leave the site.
- As required by the HRM By-Law L-200 and NS Environment Guidelines for the Siting and Operation of Waste Transfer Stations, the site operations and building locations will correspond to the required off-sets from nearby properties, potable wells, watercourses, water bodies, and wetland areas in order to mitigate the potential effects of site drainage to any potentially sensitive receptors. The minimum offsets will include the following:

Engineering • Surveying • Environmental

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Raiside, 1355 Bedford Hwy
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f. 902.835.5574

Antigonish Office
3-A Vincent's Way
Antigonish, NS B2G 2X3
t. 902.863.1465 (24/7)
f. 902.863.1389

Moncton Office
45 Price Street
Moncton, NB E1A 3R1
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f. 902.835.5574

Deer Lake Office
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Table 1 - Minimum separation distances for C&D facilities as per HRM By-Law L-200

Receptor/Location	Minimum Separation Distances (m)	
	Transfer Stations	Processing Operations
Proposed transfer/processing area or stockpile to property line (if within 250 m of residential or institutional property use).	30	60
Proposed transfer/processing area or stockpile to property line (if not within 250 m of residential or institutional use buildings).	10	10
Proposed transfer/processing area or stockpile (if within enclosed building) to property line.	10	10
Proposed transfer/processing area or stockpile to watercourse.	30	60
Proposed transfer/processing area or stockpile to off-site potable well.	30	60

- All C&D material shall be placed, tipped, stored, and processed on impermeable pads which shall be designed to minimize material and liquids/leachate from entering the groundwater or discharging away from the pads into any nearby surface water receptors. Additionally, where necessary, C&D material storage/transfer areas and processing areas will be covered to minimize contact of the material with precipitation. Liquid run off from the site shall be drained through defined outflow points in the diversion berm. The drainage channels shall be complete with a valve which can be closed in order to temporarily stop discharge of liquid from the site until it can be transported and disposed of off site.
- No C&D materials shall remain on site of a C&D processing facility longer than one year, and no C&D materials shall remain on a site of a transfer station longer than 15 days. An equivalent or greater amount of C&D materials must be removed from the site than what is accepted into the site in one calendar year.
- A berm shall be constructed on the down-gradient side of the site between site operations and the down-gradient Pond and Rocky Lake. The berm shall be constructed using compacted clay soil with a hydraulic conductivity of 1×10^{-6} cm/s or less, or other suitable impermeable material with an equal level of protection. If clay soil is used, the clay will be covered with a layer of topsoil and growing vegetation to prevent erosion of the berm. A ditch shall be installed on the up-gradient side of the berm to allow for surface water to drain to designated collection points.
- Sediment fencing shall be installed on the down-gradient side of the property between the berm and adjacent watercourses/waterbodies. The sediment fencing shall be constructed using a product specifically manufactured as sediment fence, and shall be installed as per the

manufacturer's instructions. In order to extend the life of the sediment fence and limit damage, all sediment fencing shall be installed using rebar posts and page-wire fencing as supportive backing. The bottom of all sediment fencing shall be keyed-in to the ground to prevent surface water from flowing under the sediment fencing instead of through it.

- Any areas of exposed soils on the site that are subject to regular vehicle or equipment traffic shall be covered with a suitable barrier material (e.g. compacted gravel, asphalt pavement, etc.) to minimize sediment transport and dust generation. Any areas of exposed soils that are not subject to regular vehicle/equipment traffic shall be scarified and hydroseeded to stabilize those areas, or shall also be covered with a gravel or asphalt barrier if preferred by the Site Owner.
- Environment Canada's weather forecasts shall be monitored on a regular basis. When significant rainfall is forecast, it shall be ensured that all environmental management measures on the site are in place and functional. Weather updates can be obtained by contacting Environment Canada's weather line at (902) 426-9090.
- Clean surface water runoff shall be diverted around work areas and C&D material storage and processing areas, where applicable.
- Trucks hauling C&D materials to and from the site shall have the material in transport covered (e.g. tarps, cloth, etc.) to prevent dust generation or loss of the material.
- Areas for fuel storage, refuelling, lubrication or cleaning of equipment shall be located at least 30 m from wetland areas, ditches, watercourses, and/or waterbodies.
- All environmental management measures on the site shall be inspected on a weekly basis, as well as before and after each rainfall event exceeding 10 mm. Any necessary repairs or alterations to the management measures shall be made within 24 hours of detection, or immediately if a rainfall event is imminent, or if sediment or leachate-impacted water is being discharged to a receiving waterbody. Each inspection shall be recorded and the documentation kept on file if requested by NS Environment or the HRM. The inspection requirement for the site shall be completed on an on-going basis until the C&D waste transfer activities cease on the site.
- Baseline surface water quality samples shall be collected from the adjacent receiving waterbodies prior to commencement of site C&D transfer/processing operations. Additionally, baseline groundwater quality samples will also be collected from groundwater monitoring wells. It is understood that monitoring wells were present on the site as part of previous environmental assessment activities. If possible, the previously-installed groundwater monitoring wells may be used for this purpose; however, there is potential that installation of additional monitoring wells may be required to adequately monitor proposed site activities. All baseline groundwater and surface water samples shall be analyzed for the Comprehensive

Lists of Parameters as included in Schedule 1, Columns 1 and 3, respectively, of the NS Environment Guidelines for the Siting and Operation of Waste Transfer Stations.

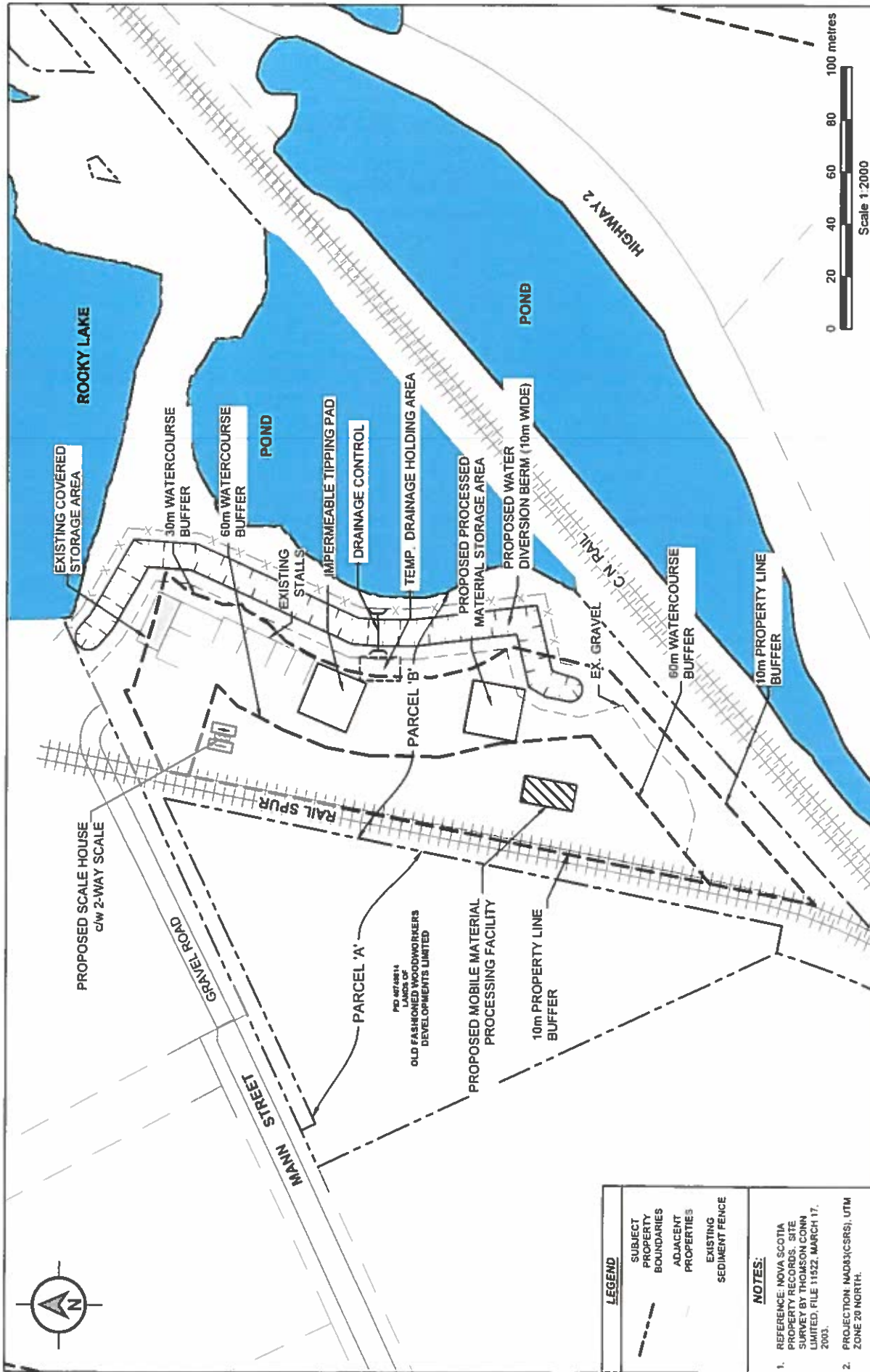
- An on-going surface water and groundwater monitoring program shall be completed at the site until C&D waste transfer/processing activities cease and the site no longer receives C&D waste. The monitoring program shall include the following:
 - Groundwater – the groundwater monitoring program will include at least one monitoring well located hydraulically down-gradient of site activities and up-gradient of receiving waterbodies, as well as one groundwater monitoring well located hydraulically up-gradient of site activities. Representative samples of groundwater shall be obtained from the wells on a semi-annual basis during high-low flow periods and analyzed for the parameters listed in Schedule 1, Column 1 of the NS Environment Guidelines for Siting and Operation of Waste Transfer Stations. An annual report of the monitoring results shall be prepared and submitted to NS Environment. NS Environment will also be notified within 60 days of sample collection or 5 days of sample analysis if any analysis results are noted to have significantly increased beyond expected seasonal variation as the result of site activities. The parameters monitored as part of the groundwater monitoring program may be amended if the results of the monitoring program indicate that such would be applicable.
 - Surface Water – the surface water monitoring program will include collection of representative samples of surface water being discharged from the facility and that of any watercourse, including upstream control locations, which may be affected by stormwater run-off or sediment discharge from the facility. The surface water sampling shall be conducted on a semi-annual basis during high/low flow periods, and shall be analyzed for the parameters listed in Schedule 1, Column 3 of the NS Environment Guidelines for the Siting and Operation of Waste Transfer Stations. An annual report of the monitoring results shall be prepared and submitted to NS Environment. NS Environment will also be notified within 60 days of sample collection or 5 days of sample analysis if any analysis results are noted to have significantly increased beyond expected seasonal variation as the result of site activities. The parameters monitored as part of the surface water monitoring program may be amended if the results of the monitoring program indicate that such would be applicable.
- The Site Owner and/or Operator shall be responsible to complete regular monitoring of potential odours from site operations. If necessary, mitigative measures shall be taken to reduce odour emissions from the site.
- A protocol shall be developed and implemented at the site for managing unacceptable materials that may potentially be received. Additionally, the facility shall have measures in place to prevent illegal dumping and vandalism, and shall have a protocol in place to address and record/document any complaints that may be associated with the operation of the site.

- The Site Owner and/or Operator shall implement appropriate controls to minimize dust generation from site activities. Particulate emissions at or beyond the facility property boundaries shall not exceed an annual geometric mean of $70 \mu\text{g}/\text{m}^3$, or a daily (24 hour) average of $120 \mu\text{g}/\text{m}^3$. Monitoring of and reporting on site particulate emissions shall be conducted at the direction of NS Environment or the HRM.
- The Site Owner and/or Operator shall be responsible to implement appropriate controls to minimize sound generation from site activities. Sounds levels at or beyond the facility property boundaries shall not exceed 65 dBA during daytime hours (0700-1900 hours), 60 dBA during evening hours (1900-2300 hours), and 55 dBA during overnight hours (2300-0700 hours), Sundays and Statutory Holidays. Monitoring of and reporting on site noise levels shall be conducted at the direction of NS Environment or the HRM.
- The Site Owner and/or Operator shall implement vector control measures (e.g. control of birds, insects, rodents, etc.), if applicable. An inspection of the facility as part of the daily operations shall be completed to maintain good housekeeping practice and take appropriate action to reduce vector and litter problems, if applicable. The use of pesticides must comply with applicable Federal, Provincial, and/or Municipal regulations.
- A retention pond or structure shall be constructed on the down-gradient side of the site in order to capture and control run-off from the material transfer, stockpiling, and processing areas.
- No portion of the site will be located within the 1 in 100 year floodplain.

Thank you,
Originally Signed

Nic Strum, P.Eng
Project Engineer
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LEGEND	
	SUBJECT PROPERTY BOUNDARIES
	ADJACENT PROPERTIES
	EXISTING SEDIMENT FENCE

NOTES:

- REFERENCE: NOVA SCOTIA PROPERTY RECORDS, SITE SURVEY BY THOMSON CONN LIMITED, FILE 11522, MARCH 17, 2003.
- PROJECTION: NAD83(CSRS), UTM ZONE 20 NORTH.

FIRST MUTUAL PROPERTIES ENVIRONMENTAL FEATURES 130 MANN STREET, BEDFORD, NOVA SCOTIA C&D SITE LAYOUT				DRAWING #:	1	
DATE:	MAY 2016	PROJECT #:	15-5432	CHECKED BY:	NS	
DRAWN BY:	RW					
SCALE:	1:2000					