



**Corporation de la ville de
Hawkesbury**

**Comité des services des travaux
publics et environnement**

**12 août 2016
13h00**

Salle du conseil

Corporation of the Town of Hawkesbury

**Public Works and Environment Services
Committee**

**August 12, 2016
1:00 p.m.**

Council Chambers

- | | |
|--|---|
| 1. <u>Ouverture de la réunion</u> | <u>Call to order</u> |
| 2. <u>Adoption de l'ordre du jour</u> | <u>Adoption of the agenda</u> |
| 3. <u>Divulgence de conflit d'intérêt</u> | <u>Disclosure of pecuniary interest</u> |
| 4. <u>Visiteurs</u> | <u>Visitors</u> |
| 4.1 Aucun | None |
| 5. <u>Administration</u> | <u>Administration</u> |
| 5.1 Aucun | None |
| 6. <u>Finance</u> | <u>Finance</u> |
| 6.1 Aucun | None |
| 7. <u>Projets capitaux</u> | <u>Capital projects</u> |
| 7.1 Installation de lumière de circulation sur la route 17 et Tupper | Installation of circulation light corner of Highway 17 and Tupper |
| 7.2 Travaux de pavage 2016 – échéancier des travaux à entreprendre | 2016 Paving projects – schedule of work to be undertaken |

7.3	Dépotoir de neige - travaux à entreprendre pour hiver 2016-17	Snow waste disposal site – schedule of work to be undertaken for winter 2016-17	1-17
7.4	Luc Royer – 403 Catherine – mur de soutènement	Luc Royer – 403 Catherine – retaining wall	
7.5	Mise à jour de l'étude de nos rues et services	Update on study of roads and services	
8.	<u>Travaux publics</u>	<u>Public Works</u>	
8.1	Mise à jour d'embauche – département de la voirie	Hiring update – department of roads	
8.2	Lumières de circulation, rues William et Main	Circulation lights, corner William and Main	
8.3	Étude de collision: Main et William	Collision stats : Main and William	
8.4	Étude de contamination – coin McGill et Bon Pasteur	Contamination study – corner of McGill and Bon Pasteur	
9.	<u>Environnement</u>	<u>Environment</u>	
10.	<u>Période de questions/commentaires</u>	<u>Question/comment period</u>	
11.	<u>Autres articles</u>	<u>Other items</u>	
12.	<u>Huis-clos</u>	<u>In-camera</u>	
	Personnel	Staff	
13.	<u>Ajournement</u>	<u>13. Adjournment</u>	

Boudrias, Guillaume

From: Bordeleau, Etienne <etienne.Bordeleau@ghd.com>
Sent: July 8, 2016 5:39 PM
To: Boudrias, Guillaume
Cc: Skirth, Christine; Project Email Filing
Subject: Snow Depot Design Approach, Decisions, and Proposed Schedule ~COR-11114641-98
~
Attachments: 11114641-ProposedProjectSchedule2016.pdf

Follow Up Flag: Follow up
Flag Status: Flagged

Hello Guillaume,

As follow-up to our meeting, we've summarized below select design approach items with some requiring Town decisions. Our proposed project schedule is also attached. Should you have any questions, please do not hesitate to contact us.

Approach and Items for Decisions

1. **Lessons Learned** – Will the Town provide additional lessons learned regarding the 2015/2016 temporary snow depot? – Design can progress with the information received to date and decisions on the items herein.
2. **Public Works Garage** – What is the Town's desired area for the public works garage as this will influence maximum snow depot area?
3. **Road Allowance** – What is the intended use of the potential road allowance to be designed parallel to Spence Avenue and along the southern boundary of the snow depot?
4. **Snow Depot Pad** – Does the Town desire to have a granular or an asphalt surface for snow depot pad?
5. **Heated Shed and Private Users** – Does the Town desire to have a heated shed on-site for attendant/charging private users? – Design for heated shed (prefabricated 'hygrade' structure, requiring electrical tie-in information from Town) would be additional \$7,000 plus taxes and can be conducted concurrent with snow depot design schedule.
6. **Geotechnical Assessment** – The purpose would be to determine geotechnical site conditions and aggregate specifications for access roads, granular or asphalt snow depot pad, potential heated shed pad, and possibility for salvage and reuse of native materials like topsoil and as infill for existing excavations. – Geotechnical assessment would consist of utility locates, test pits (assumed using Town backhoe/labour), soil samples, and geotechnical report at an additional \$8,000 plus taxes, adding 3-4 weeks to the snow depot design schedule.
7. **Site Lighting** – Does the Town desire to have permanent or temporary lighting for the 2016/2017 snow depot season? – Design for site lighting (requiring electrical tie-in information from Town) would be additional \$14,000 plus taxes and can be conducted concurrent with snow depot design schedule.
8. **Front End Documents** – Can the Town provide the copy of the front end documents to be used?
9. **Existing Available Aggregate** – Can the Town provide the sample results and quantities of existing available aggregate to be carried as provisional items for the construction contract?

10. **Existing Monitoring Wells** – Based on the anticipated design area, three existing monitoring wells will need to be decommissioned – This can be done as part of the snow depot construction contract or in advance (estimated at \$3,000 plus taxes, including utility locates).
11. **PO and Budget** – Our records indicate the PO (ENG-009-15) is currently at \$46,400 plus taxes, missing the agreed \$4,500 plus taxes for sampling/assessment conducted in 2015/2016. For the permanent snow depot design, the PO is requested to be adjusted for the agreed \$4,500 plus taxes, the recommended sampling/assessment for 2016/2017 at \$4,650 plus taxes, the meeting and summary email at \$1,850 plus taxes, and \$1,350 to capture current annual rates (with extension of 5% discount to Town). As such, the requested PO adjustment is to \$58,750 plus taxes. Should the above noted design decision items be carried, the PO would require adjustment by the respective additional prices.

As requested, the following note is provided regarding snow depot potential environmental impacts and treatment contingency. This note supports the technical information submitted as part of correspondences to Honorable Jeanne Charlebois (July 28, 2015) and yourself (November 25, 2015). *Note:* The current design approach involving infiltration of snow melt water into the groundwater regime may influence the extent/magnitude of contaminant migration off-Site, potentially leading to a required capture/treatment contingency for the snow melt water. The identification for the potential need to implement a capture/treatment contingency can be conducted using the ongoing semi-annual groundwater monitoring results for volatile organic compounds and additional snow depot sampling parameters chloride and total dissolved solids. Sampling for chloride and total dissolved solid before and after snow depot seasons is recommended for a period of two years. After each year, an assessment for the need to continue monitoring and comment on the potential need for contingency would be conducted.

Have a nice weekend,

Étienne L Bordeleau, P.Eng. MASc

GHD

T: +1 613 727 0510 | M: +1 613 614 5546 | E: etienne.bordeleau@ghd.com
179 Colonnade Road South Suite 400 Ottawa Ontario K2E 7J4 Canada | www.ghd.com

WATER | ENERGY & RESOURCES | ENVIRONMENT | PROPERTY & BUILDINGS | TRANSPORTATION

Please consider our environment before printing this email

Project Schedule

Design and Assessment for Permanent Snow Depot
 1423 Cameron Street Property
 Town of Hawkesbury, Hawkesbury, Ontario

ID	WBS	Task Name	Duration	Start	Finish	June	July	August	September	October	November	December	January	February	March	April	May	June	
1	1	Design and Assessment for Permanent Snow Depot	271 days	Mon 6/6/16	Mon 6/19/17														
2	1.1	Ongoing Communications and Project Management	246 days	Mon 6/6/16	Mon 5/15/17														
3	1.2	Town Approval to Proceed	1 day	Fri 7/15/16	Fri 7/15/16														
4	1.3	Detailed Design	41 days	Mon 7/18/16	Mon 9/12/16														
5	1.3.1	60% Tender Package (Front End, Specifications, Drawings)	15 days	Mon 7/18/16	Fri 8/5/16														
6	1.3.2	Town Review	5 days	Mon 8/8/16	Fri 8/12/16														
7	1.3.3	95% Tender Package (Front End, Specifications, Drawings)	10 days	Mon 8/15/16	Fri 8/26/16														
8	1.3.4	Town Review	5 days	Mon 8/29/16	Fri 9/2/16														
9	1.3.5	100% Tender Package (Front End, Specifications, Drawings)	5 days	Mon 9/5/16	Fri 9/9/16														
10	1.3.6	Town Approval	1 day	Mon 9/12/16	Mon 9/12/16														
11	1.4	<i>Town Tender and Award Period</i>	19 days	Thu 9/13/16	Fri 10/7/16														
12	1.5	<i>Town and Contractor Construction Period</i>	35 days	Mon 10/10/16	Fri 11/25/16														
13	1.6	Monitoring and Assessment	141 days	Mon 12/5/16	Mon 6/19/17														
14	1.6.1	Monitoring Fall 2016	1 day	Mon 12/5/16	Mon 12/5/16														
15	1.6.2	Monitoring Spring 2017	1 day	Mon 5/22/17	Mon 5/22/17														
16	1.6.3	Assessment Spring 2017	1 day	Mon 6/19/17	Mon 6/19/17														

Project: 1114641-ProjectSchedule Date: Fri 7/8/16	Task		External Tasks		Manual Task		Finish-only	
	Split		External Milestone		Duration-only		Deadline	
	Milestone		Inactive Task		Manual Summary Rollup		Progress	
	Summary		Inactive Milestone		Manual Summary			
	Project Summary		Inactive Summary		Start-only			

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November 25, 2015

Reference No. 11114641

Guillaume Boudrias
Coordonnateur de Projets Capitaux
600 Higginson Street
Hawkesbury, ON K6A 1H1

Dear Mr. Boudrias:

**Re: MOECC Consultation/Design Requirements/Preferred Location
Development of a Snow Depot
1423 Cameron Street, Hawkesbury, Ontario**

1. Introduction

GHD Limited (GHD) was retained by the Corporation of the Town of Hawkesbury (Town) to provide consulting engineering services for the development of a snow depot on a portion of the property located at 1423 Cameron Street (Site) in Hawkesbury, Ontario.

Given the potential environmental concerns with the development of a snow depot¹ and the unknowns with respect to the size of the snow depot and management equipment, GHD and the Town discussed trial use of the Site for a snow depot planned for winter 2015/16; and based on the results of hydraulic

¹ GHD expects that the construction and operation of a snow depot on the Site will influence the currently-observed hydrogeology and contaminant chemistry on-Site and off-Site due to the significant temporary seasonal influx of snow melt water. A snow depot with an average 10 metre (m) depth is expected to generate 1 m of groundwater; and with an assumed soil porosity of 0.25, a temporary 4 m rise in groundwater elevation is expected within the vicinity of the snow depot. The proposed snow melt management approach is through infiltration achieved by preferential grading of the area around the proposed snow depot footprint. The increase in groundwater table elevation will likely increase the groundwater flow in all directions, though specifically towards the north (Spence Avenue and adjacent IKO property) and northeast (Tupper Street and adjacent Jean Coutu property). The groundwater table has historically been observed to be elevated in the spring (related to annual spring thaw) with elevated contaminant concentrations, as compared to the fall, for VOC parameters that exceed the MOECC potable groundwater criteria, as provided in Table 2 (Table 2 Criteria) of Soil, Groundwater, and Sediment Standards for use under Part XV.1 of the Environmental Protection Act (MOECC, April 2011). The increase in contaminant concentrations is attributable to the fate and transport mechanisms of the VOC parameters. Rising groundwater elevations cause the release of VOCs that are contained in the soil matrix and fractured bedrock and increases the aqueous phase contaminant plume. Additionally, collected snow may contain contaminants originating from de-icing materials and chemicals applied to roads, as well as from debris resulting from snow removal activities.

and contaminant monitoring, a determination would be made as to the suitability of the Site location for a permanent snow depot.

This letter provides a summary of the approval requirements confirmed through consultation with the Ministry of the Environment and Climate Change (MOECC), and identifies the design requirements and preferred location for the snow depot resulting from the consultation with the Town. The information contained herein will be used as the basis for the design.

2. Snow Depot Development Approach

2.1 MOECC Consultation

GHD met with the MOECC and the Town on July 2, 2015 to confirm the requirements and approvals needed for development of a snow depot at the Site; and to discuss the suitability of the Site in the context of potential environmental concerns, ongoing implementation of the BCTS Cessation Plan, and the pending sale of portion(s) of the Site for redevelopment.

At the meeting, the MOECC confirmed the following:

- The MOECC document "Guideline's on Snow Disposal and De-Icing Operations in Ontario" (MOECC, February 2011) outlines the general requirements for the establishment of a snow depot.
- A snow depot is typically considered a 'Schedule A' "pre-approved" project under the Municipal Class Environmental Assessment (EA) process (Municipal Engineer's Association, October 2000 as amended 2007 and 2011). The Municipal Class EA process applies to standard public sector projects with foreseeable and manageable environmental impacts and is used for planning and decision-making, ensuring potential impacts are known and managed in advance.
- An Environmental Compliance Approval (ECA) (Industrial Sewage) is required for operation of the snow depot when surface water control features are constructed and operated as part of the snow depot operation. However, if surface water control features are not required, then an ECA from the MOECC does not need to be sought. Obtaining an ECA (Industrial Sewage) approval from the MOECC typically requires 8 to 12 months following submittal of the complete application with supporting documentation.
- An evaluation of the hydrogeology and contaminant chemistry on and off Site should be completed following the first season of operation of the snow depot to confirm the suitability of the Site for long-term use as a snow depot.

GHD and the MOECC also attended a Town Council meeting on September 11, 2015 to discuss the above with Council.

3. Design Requirements

3.1 'Schedule A' Municipal Class Environmental Assessment

Following the meeting with the MOECC in July 2015, the Town confirmed that the Site was suitable from a Municipal Class EA perspective for the development of a snow depot on Site including potential environmental concerns and conformance to Site zoning.

3.2 Technical Design Requirements

GHD met with Town representatives (Guillaume Boudrias and Alain Lavoie) on November 11, 2015, to finalize the design requirements for the proposed snow depot and review options for locating the snow depot within the Site.

The design requirements for the snow depot were developed in consideration of historical snow fall and melt data, road and sidewalk network to be cleared, empirical data from the former snow depot operations, planned management equipment to be utilized, theoretical snow densities and compaction rates, and best practices. The design requirements are summarized in Table 3.1 below.

Table 3.1 Design Requirements

Component	Requirement	Comment
Management of Snow Melt	Passive, overland sheet flow towards low lying areas	Overland sheet flow towards low lying areas. Surface water currently managed by sheet flow towards depressions located in the northeastern portion and southeastern portions of the Site. The bottoms of the depressed areas are generally above bedrock and the high groundwater table, unimpeded groundwater infiltration is likely. A portion of this southeastern sheet flow is conveyed in an easterly direction along the southern perimeter ditch, continuing through municipal ditching along Tupper Street, then towards the east along County Road 17.
Capacity	100,000 m ³ (50,000 m ³ for interim use)	Capacity calculations are presented in Attachment A. Calculations were used as a basis for discussion with the Town. Final design quantity chosen based on current and planned practices (i.e., 50,000 m ³ acceptable for trial use in winter 2015/16).
Maximum Height	10 m	Based on the use of a dozer to pile snow. The use of snow blowing equipment may permit height up to 20 m.
Maximum Side Slope	1:1	Based on approximate angle of repose.
Preferred Alignment	South facing	To optimize sun exposure and rate of snow melt.
Base Surface	Hard surface preferred	Gravel surface considered for trial use (winter 2015/16).
Access Road	8 m wide	Minimum width to support single access/egress for traffic.
Access From	Spence Avenue preferred	Truck traffic access/egress to/from Cameron Street not ideal but considered. Trucks would enter/exit to the north.

Table 3.1 Design Requirements

Component	Requirement	Comment
On-Site Truck Volume	6-10	Triaxle dump trucks (no pups).
Operational Setbacks	10 m (dozer) 20 m (trucks)	Could be less for trial use (winter 2015/16).
Site Security	Locked gate	--
Site Lighting	Yes	To be evaluated during winter 2015/16.
Site Visual Screen	Soil berm and coniferous vegetation	--
Refuse Collection	--	Ongoing as needed and following snow melt.

3.3 Preferred Location

The Site is approximately 15.2 hectares (ha) in size and is bordered by Tupper Street to the east, Cameron Street to the west, Spence Avenue to the north, and a commercial development to the south. GHD understands that the portions of the Site adjacent to Tupper Street and Cameron Street are generally designated for sale and redevelopment, and that the central and northeastern portions of the Site will generally be retained for use by the Town as a municipal works garage and proposed snow depot.

Two locations were evaluated for the positioning of the snow depot within the Site. Option 1 is located in the northeastern portion of the Site and Option 2 is located in the southern portion of the Site. A modified version of Option 2 (Option 2a) considers the short-term use of the southern portion of the Site as a snow depot while facilitating continued IKO use of a portion of the Site.

Both Options 1 and 2 are technically suitable locations for development of the snow depot at the Site. The preferred location was selected in consultation with the Town based on technical and best use of the overall Site.

Option 1 was identified as the preferred location for the development of the snow depot. Option 1 was selected in consideration of the following:

- Access from Spence Avenue: Less congested and currently used for truck traffic and queuing of truck traffic entering IKO property.
- Land Value: Known contamination beneath the lands and existing BCTS infrastructure.
- Distance from Commercial Development: Commercial development to the south vs. a split between commercial development to the south and potentially north and east.

However, given the capital costs and schedule for development of the Option 1, Option 2a was selected as an interim location for the trial-use of a snow depot during winter 2015/16. This location can be developed with minimal cost and in the shortest timeframe, and can accommodate the continued IKO use of a portion of the Site.

As such, Option 2a is carried for Winter 2015/16. In addition the Town will also place snow in the depressed areas identified in Option 1 to facilitate the site suitability evaluation for long term use of the northeast parcel long-term.

Should you have any questions on the above, please do not hesitate to contact us.

Sincerely,

GHD Limited

A handwritten signature in black ink, appearing to read "Christine Skirth". The signature is fluid and cursive, with a large initial "C" and a long, sweeping tail.

Christine Skirth, C.E.T., PMP

CS/al/1

Encl.

Attachment A
Design Capacity Calculations

Attachment A

Design Capacity Calculations
 MOECC Consultation/Design Requirements/Preferred Location
 Development of a Snow Depot
 1423 Cameron Street, Hawkesbury, Ontario

Snow Depot Design

Overall Reference Data/Assumptions

Total Annual Snowfall (cm)

Value	Units
221	cm
208	cm
136	cm
332	cm

Snow Clearing Assumptions

Value	Units
32,000	m
10.0	m
8,000	m
1.8	m

Snow Clearing Dimensions

Value	Units
334,000	m ²

Volume Cleared (V)

Snow Melt Percentage (Prior to Clearing)

Value	Units
25%	-
554,064	m ³
520,915	m ³
339,929	m ³
831,660	m ³

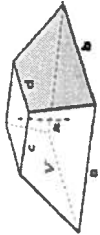
Snow Depot Sizing

Value	Units
100	kg/m ³
550	kg/m ³
5.5	-
100,739	m ³
10.0	m
1.0	m:m

Location Assessment Data/Assumptions

Truncated Pyramid

Base Area
 Approximate Volume



	Option 1	Option 2	Option 2a	Option 2a Additional	Units
Value	12,300	12,125	7,000	3,300	m ²
Value	100,000	100,000	50,000	20,000	m ³

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Attachment B
Snow Depot Location Assessment

Attachment B Snow Depot Location Assessment

1. Snow Depot Location Assessment

Two locations were evaluated for the positioning of the snow depot within the 1423 Cameron Street property (Site). Option 1 is located in the northeastern portion of the Site and Option 2 is located in the southern portion of the Site. A modified version of Option 2 (Option 2a) considers the short-term use of the southern portion of the Site as a snow depot while facilitating continued IKO use of a portion of the Site. An overview of locations and pros and cons for Option 1 and Options 2 and 2a are presented in Sections 2 and 3, respectively. The preferred location is presented in Section 4. The relative location for each option (Options 1, 2, and 2a) are shown on the Figures B.1 and B.2, respectively.

2. Option 1 – Northeastern Portion of the Site

2.1 Parcel Setting

Option 1 is located in the northeastern portion of the Site, abutting Spence Avenue to the north and Tupper Street to the east. Access to this parcel is via a gravel road from Spence Avenue. The gravel road was constructed as a temporary access road as part of the 2009/10 Site Remedial Works. The access road is approximately 5 metre (m) in width and is equipped with a lockable gate. Non-backfilled areas (or depressions), resulting from the 2009/10 Site Remedial Works are present on both sides of the access road. The parcel is fenced on all sides with a variety of fencing materials; and is generally in fair condition.

The eastern portion of this parcel was historically used for the disposal of yarn waste and drums containing dyes and chemicals used as part of the former Amoco Fabrics and Fibers (Amoco) facility operations. In 2009/10, the area was remediated through excavation and off-Site disposal of yarn waste, drums, and impacted soils; and partial groundwater remediation through the application of chemical oxidants. Remaining contamination is limited to impacted soil seams within the fractured bedrock along the perimeter of the parcel adjacent to Tupper Street and Spence Avenue, and impacted groundwater at the overburden/bedrock interface. Groundwater elevations and chemistry in the eastern portion of the parcel are monitored on an annual basis as a requirement of the Site Certificate of Approval. Infrastructure for the mothballed groundwater pump and treat system (e.g., forcemain and extraction wells) is present along the parcel perimeter adjacent to Tupper Street and Spence Avenue.

The western portion of this parcel is undeveloped, gradually sloped to the north, with medium to dense tree coverage. No known environmental impairment exists in the western portion of the parcel.

2.2 Pros and Cons

Pros and cons for development of the northeastern parcel as a snow depot are presented below. **It is noted that the pros and cons presented below do not address the highest and best uses of the lands.**

2.2.1 Pros

- Environmental Compliance Approval (ECA) is Not Likely Required: Snow melt and surface water runoff from this area would be controlled by infiltration.

- **Contaminating Life Span of the Site may be Shortened (Area Known to be Impacted):** The eastern half of this parcel as well as the downgradient land is impacted and groundwater flow and chemistry is well documented in this area; increasing the groundwater flow may decrease the time for natural attenuation of residual Site contaminants.
- **Existing Access from Spence Avenue:** Access to the Site from Spence Avenue vs. Cameron Street is preferred due to low existing traffic volumes on Spence Avenue and the use of this portion of Spence Avenue for existing truck traffic; access from Cameron Street would introduce a higher ratio of truck to passenger vehicles, including vehicles entering the Smart Center property via Cameron Street.

2.2.2 Cons

- **Capital Costs:** Construction of a snow depot on the northeastern portion of the Site would require the following at a minimum:
 - Clearing and grubbing of approximately 0.6 ha. of land
 - Construction of a snow dumping pad (using granular, asphalt, or concrete), including a geotechnical assessment
 - Improvements to on-Site access road, including geotechnical assessment
 - Abandonment and potential replacement of monitoring locations
 - Electrical supply and lighting
 - Visual screening berms
 - Fencing repair/improvements
- **Schedule Delay:** The duration to complete the geotechnical assessment, tender, award, and construct the works is estimated at 6 to 10 weeks; however, some snow could be received immediately, if placed within the depressed areas located in the eastern portion of the parcel.

3. Option 2 – Southern Portion of the Site

3.1 Parcel Setting

Option 2 is located in the southern portion of the Site west of the tentatively sold parcel fronting on Tupper Street. Access to the parcel is via a paved and gravel road from Cameron Street. The access road was used for heavy truck traffic when the Site was occupied by Bentley. The access road is approximately 8 m in width and is equipped with a lockable gate. The perimeter of the parcel is fenced with the exception of the east side. The condition of the fencing is generally in good condition.

The southern portion of the Site was historically occupied by the former Amoco facility, including the facility building, parking, and storage areas. The facility building has been demolished; however the concrete slab remains. The slab is elevated (up to 0.75 metres) above the lower surrounding grade with concrete rubble/debris generally placed against the edge of slab and sloped towards the existing grade. The parking and storage areas are generally flat with a combination of asphalt or granular surfaces. A ditch exists along a portion of the southern Site boundary and conveys surface water runoff from the Site to the municipal ditch located along the west side of Tupper Street.

This former Amoco facility concrete slab is currently leased to IKO for the temporary storage of shingle products; as is a portion of the existing BCTS building located on the parcel abutting Tupper Street, which is tentatively sold. IKO vehicles enter the Site via Spence Avenue using the temporary access road noted in Section 2 and exists the Site via the access road to Cameron Street. Access ramps are present at the east and southwestern edge of the concrete slab to facilitate truck traffic onto and off the concrete slab.

To facilitate the continued use of the site by IKO in the short-term, Option 2a showing a revised orientation of the snow depot was developed.

3.2 Pros and Cons

Pros and cons for development of the southern parcel as a snow depot are presented below. **It is noted that the pros and cons presented below do not address the highest and best uses of the lands.**

3.2.1 Pros

- Environmental Compliance Approval (ECA) is Not Likely Required: Snow melt and surface water runoff from this area would be controlled by infiltration and overland flow to the existing perimeter ditch along the southern Site boundary. In the short term, the snow melt and surface water could also be directed to the depression on the southeastern portion of the Site that is tentatively sold.
- Contaminating Life Span of the Site may be Shortened (Area Known to be Impacted): The eastern edge of this parcel as well as the downgradient land is impacted and groundwater flow and chemistry is well documented in this area; increasing the groundwater flow may decrease the time for natural attenuation of residual Site contaminants, though not to the same extent as may be observed if the snow depot were developed on the northeastern portion of the Site as noted in Section 2.
- Capital Costs: Construction of a snow depot on the southern portion of the Site would cost less than development of the northern portion of the Site since the current surface (i.e., asphalt and gravel) is suitable as a snow dumping pad and clearing and grubbing is not required. Under Option 2a, it is possible to use the facility in the Short term with the following minor improvements:
 - Temporary lighting connected to the existing BCTS building power
 - Separation berms and temporary fencing to delineate IKO working area
 - Minor site regrading
- Schedule Advance: For trial-use of a snow depot on the Site, this parcel could be developed to receive snow within 1 to 6 weeks, assuming the Town can sole-source a local contractor and or self-perform the works.

3.2.2 Cons

- Existing Access from Cameron Street: Access to the Site from Cameron Street would introduce a higher ratio of truck to passenger vehicles, including vehicles entering the Smart Center property via Cameron Street.
- Increase in Nuisance Impacts to Adjacent Land Owners/Tenants: Nuisances including visual, noise, and dust.

4. Preferred Location

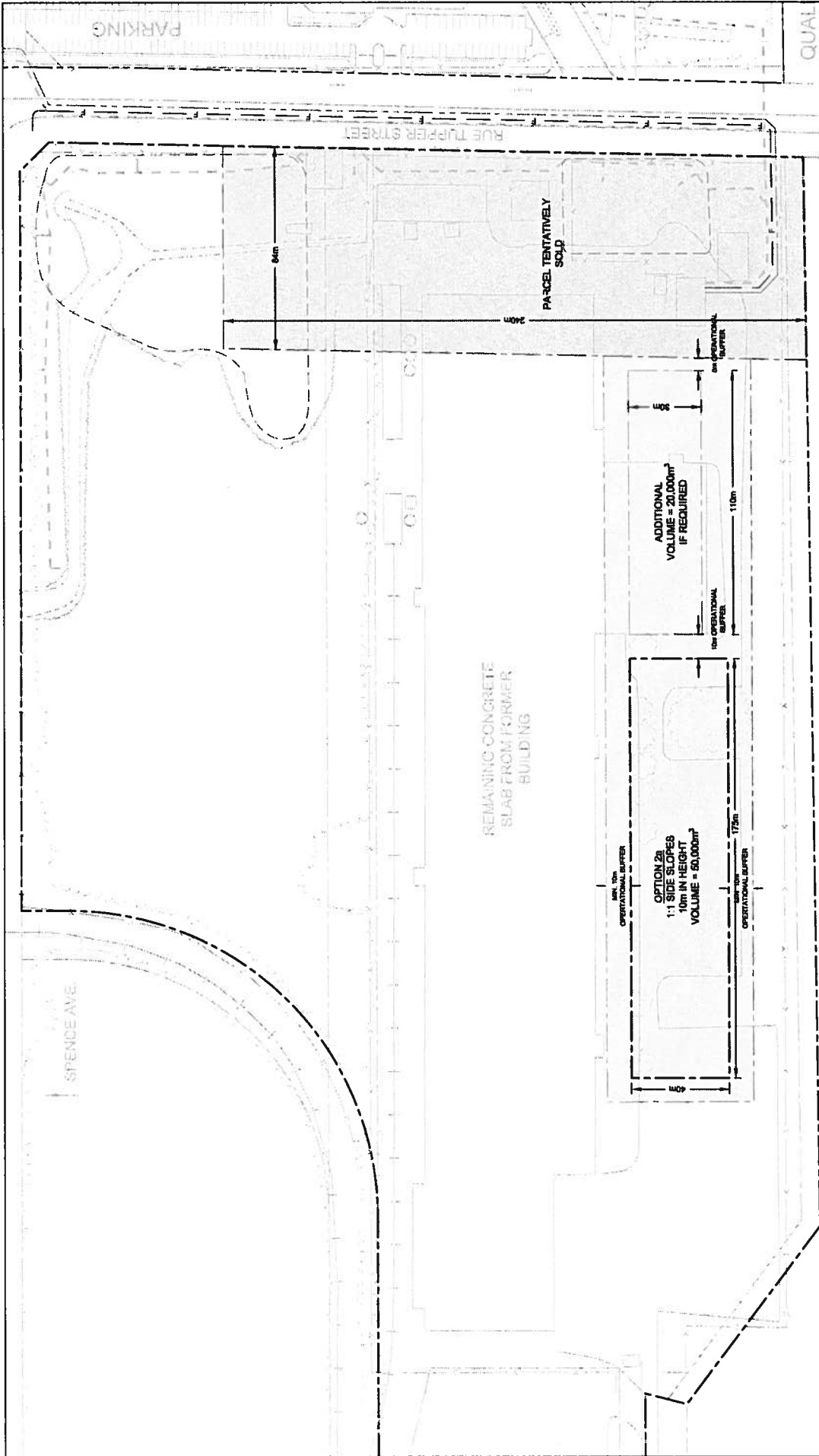
Both Options 1 and 2 are technically suitable locations for development of the snow depot at the Site. The preferred location was selected in consultation with the Town based on technical and best use of the overall Site.

Option 1 was identified as the preferred location for the development of the snow depot. Option 1 was selected in consideration of the following:

- Access from Spence Avenue: Less congested and currently used for truck traffic and queuing of truck traffic entering IKO property.
- Land Value: Known contamination beneath the lands and existing BCTS infrastructure.
- Distance from Commercial Development: Commercial development to the south vs. a split between commercial development to the south and potentially north and east.

However, given the capital costs and schedule for development of the Option 1, Option 2a was selected as an interim location for the trial-use of a snow depot during winter 2015/16. This location can be developed with minimal cost and in the shortest timeframe, and can accommodate the continued IKO use of a portion of the Site.

As such, Option 2a is carried for Winter 2015/16. In addition the Town will also place snow in the depressed areas identified in Option 1 to facilitate the site suitability evaluation for long term use of the northeast parcel long-term.



11114641-01
Nov 25, 2015

CORPORATION OF THE TOWN OF HAWKESBURY
1423 CAMERON STREET PROPERTY

GHD

CONCEPTUAL SNOW DEPOT LAYOUT OPTIONS

FIGURE B.2