COMMITTEE OF THE WHOLE
TUESDAY, JUNE 16, 2009 AT 9:00 A.M.
AGENDA

I.E. (Information Enclosed)
I.P.P. (Information Previously Provided)

LUNCH WILL BE PROVIDED
TOWN GOALS

1) SUPPORT AND GROWTH OF ECONOMY
2) ESTABLISH AN INFRASTRUCTURE PRIORITY PLAN
3) PRESERVATION OF ENVIRONMENT
4) ENSURE FISCAL ACCOUNTABILITY
5) ENHANCE COMMUNITY CHARACTER

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1. PUBLIC NOTICES

6 1.1. Public Notice re 2009 Budget Amendment re Cemetery (I.E.)

2. NOTICE OF PECUNIARY INTEREST AND GENERAL NATURE THEREOF

3. DELEGATIONS

3.1. 9:30 a.m. Public Notice re Budget Amendment

7-30 3.2. 10:00 a.m. Terry Sanderson and Pam Hiller re 211

31-49 3.3. 11:30 a.m. Manager of Public Works Report No. PW18-2009/Jeff Graham (I.E.) Agreement with Health Unit re beach testing. (I.E.)

50-81 3.4. 1:00 p.m. Second Planning Report after deferral Dipoce OPA and Rezoning (I.E.)

82-101 3.5. 2:00 p.m. Mark Bell, Executive V.P. Development, Windstream Energy Inc. (I.E.)

4. OTHER BUSINESS/NEW BUSINESS

102-103 4.1. OSTAR- Sauble Possible Unfinanced Capital FS14-2009 (I.E.)

104-106 4.2. C.A.O. Report No. 10-2009 re Scheifley Proposal (I.E.)

107-111 4.3. Consent Application B-58-2009.59 re Sinclair (I.E.)

3.3

Brad McRoberts
Manager of Public Works

The Corporation of the Town of South Bruce Peninsula
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N0H 2T0

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REPORT RE: C.O.W. June 16, 2009
REPORT NO: PW18-2009

SUBJECT: ITEM 1 – LETTER TO AMABEL WATERWORKS CUSTOMERS - UPGRADE COSTS

BACKGROUND: As a follow up of a previous report on the costs regarding the OSTAR project for the Amabel Water System, the Manager of Public Works has prepared a general letter to the customers of the Amabel Waterworks on behalf of the Council of the Town of South Bruce Peninsula as presented in Attachment A.

RECOMMENDATION: THAT Council authorize staff to issue the letter with the July water billing.

SUBJECT: ITEM 2 – SAUBLE BEACH SANITARY SEWER PROPOSED REVISIONS

BACKGROUND: The Towns' consultant (Genivar) for the Sauble Beach Sanitary Sewer Project, is proposing revisions to the design of the Sauble Beach Sanitary Sewer Project which will have implications on the overall capital project costs.

Attached please find a copy of the document entitled "Attachment to Addendum No. 2 – Revised Environmental Study Report – Class Environmental Assessment" (Attachment B).

The change focuses on a return to convention sanitary sewers from the proposed small bore sewer system. Mr. Jeff Graham of Genivar will be present to explain the rational for this proposed change and to answer any questions of Council.

RECOMMENDATION: THAT Council authorize Genivar to submit, on behalf of the Town of South Bruce Peninsula, the document entitled "Attachment to Addendum No. 2 – Revised Environmental Study Report – Class Environmental Assessment" to the Ministry of the Environment for concurrence.

Respectfully Submitted,

Brad McRoberts, P. Eng.
Manager of Public Works

Date: June 10/09

Approved by,

Malcolm McIntosh, CAO
MPA, MCIP, RPP

Date: June 10/09

Attachment to Addendum No. 2 - Revised
Environmental Study Report
Class Environmental Assessment
Town of South Bruce Peninsula

Project No. OS-05-142-11-OS

May, 2009

Prepared for:
Town of South Bruce Peninsula
Box 310, 315 George Street
Wiarton, ON N0H 2T0

Prepared by:
GENIVAR Consultants LP
945 Third Avenue East, Suite 212
Owen Sound, Ontario N4K 2K8

Project No. OS-05-142-11-OS

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Appendices

Attachment to Addendum No. 2 – Revised Environmental Study Report

Class Environmental Assessment Water and Sewage Works Study

TOWN OF SOUTH BRUCE PENINSULA

1. INTRODUCTION AND BACKGROUND

The original Environmental Study Report for the above-noted project was completed in June 2001. The 2001 Environmental Study Report recommended a large sewage system servicing the entire Sauble Beach area with a new sewage treatment plant located near Sauble Beach. This sewer system would be developed over time in phases. As well, over time, the same geographic area would be serviced with a municipal water system with supply of water from an expanded Wiarton water treatment plant. The former Hamlet of Hepworth would also receive municipal water service from the Wiarton pipeline.

Addendum No. 1 to the ESR was published in October 2003. This addendum recommended that Hepworth also be included in the new sewage system.

Subsequently, an original Addendum No. 2 was prepared in June 2006. The June 2006 Addendum No. 2 endorsed the original ESR, including construction of the large area sewage and water system for Sauble Beach and Hepworth. However, a number of Part 2 Order requests were received during the 30 day comment period for Addendum No. 2, and ultimately through consultation with the Part 2 Order registrants, Addendum No. 2 – Revised, dated December 2007, was published, and ultimately approved by the Ministry of the Environment.

Key features of Addendum No. 2 – Revised, are:

i) A much reduced sewer system servicing only the Development Control Area (DCA) of the downtown area of Sauble Beach;

ii) Design and construction of a municipal water system for the same geographic area, if funds permit, with source of water being from an expanded Amabel water system if additional groundwater or surface water supply can be located. The development of such additional water supply was anticipated to require additional environmental assessment work.

Figure 5.2 shows the Development Control Area which includes the area proposed for sewer servicing in Sauble Beach. The same area would also receive municipal water supply at some point in the future.

Addendum No. 2 – Revised also discussed use of the Clearford-style gravity sewer system. With this Attachment, a review of the use of the Clearford sewage system is provided and compared to a conventional gravity sewer system. As per this Attachment, use of the conventional gravity sewer system is now recommended for the sewer collection system for the Sauble Beach sewer project.

2. REVIEW OF SEWER SYSTEMS

As per Figure 5.2, the area in green would receive gravity sewer servicing. As noted, there are two (2) sewage pumping stations proposed. Sewage pumping station 1 (SPS-1) would receive the majority of sewage flow. It would receive all sewage flow from a point on Main Street approximately half way between Sauble Falls Parkway and Lakeland Drive. The smaller sewage pumping station 2 (SPS-2) would receive gravity sewage flows from the smaller portion of the service area bounded on the east by the D-Line to the same point on Main Street approximately half way between Sauble Falls Parkway and Lakeland Drive.

Both of these pumping stations would remain as proposed in Addendum No. 2 – Revised. The only change to Addendum No. 2 – Revised contemplated by this Attachment is the change in gravity sewer types from the Clearford gravity sewer to the conventional gravity sewer.

2.1 Clearford Sewer System

The Clearford sewer system utilizes a septic tank type, pretreatment tank to receive raw sewage from each residence or building. Typically, this tank is located on private property. The tank would include a conventional septic tank effluent filter and discharge septic tank effluent to a gravity sewer collection system. In initial discussions, Clearford indicated the sewers would typically be:

i) welded polyethylene;

ii) of size from 100 mm (4") minimum up to 200 mm (8"), depending on total capacity required;

iii) potentially laid at zero or even negative grades given that solids would not normally be carried in the pipeline system, i.e. all solids would remain in the individual septic pretreatment tanks; and

iv) minimal need for manholes or other access to the sewer pipe.

Additional manholes would be required for periodic flushing and cleaning of the sewers. The benefits of the Clearford system were identified as:

i) The sealed polyethylene sewer collector pipes would have minimal potential for infiltration or sand intrusion. Conventional gravity sewers and manholes can leak groundwater and/or let sand into the sewer or through the manholes at the lift ring joints, sewer connections, modulock adjustment rings or the frame and grate at the top of the manhole. The Clearford sewer system would have minimal manholes.

ii) The Clearford sewer system would likely be placed to the side of the paved road surface. As well, service connections to the other side of the road could be potentially made by directional

drilling underneath the asphalt or surface treatment. As such, minimal road restoration costs would be incurred.

iii) The individual treatment tank on each property would store some water to attenuate peak sewage flows.

iv) Pretreatment of raw sewage in the pretreatment tanks would reduce BOD, solids and potentially nutrient loadings at the treatment plant. This would potentially downsize the treatment plant system somewhat, reducing capital costs;

v) Removal of all grit and solids in the pretreatment tank should eliminate the need for a headworks building at the treatment plant, reducing capital costs.

vi) Sewers would be laid relatively shallow, minimizing dewatering requirements, etc., and reducing capital costs.

2.2 Potential Drawbacks of Clearford Sewer System

Following completion of the EA, and following receipt of funding approval and start of final design, the following potential drawbacks to the Clearford sewer system have been identified:

i) Siting of Individual Pre Treatment Tanks

In some cases, there is not enough room on small lots where individual pretreatment tanks can be located and still provide reasonable setbacks from building foundations or property lines. This is especially true of very small private lots (where there is no room for adequate septic systems) and in some cases, potentially larger commercial lots where the tank would cut into the available area for outside seating, parking, etc.

ii) Difficulty In Getting Permission For Individual Pre Treatment Tanks

Legally, it is not clear at this time whether or not the municipality can force an individual property owner to have a pretreatment tank located on their private property. With conventional gravity sewers, the municipality installs individual sewer laterals up to the property line. From there, individual property owners are normally responsible for connecting to the municipal sewer lateral at the property line within a timeframe set by the municipality. If such connection is never made by the private property owner, the municipality would normally charge the individual property owner as if they are connected in any event.

A similar mandatory connection policy requiring individual property owners to locate a pretreatment tank on their property, whether they agreed to or not, may not receive political or

legal support. As well, when Addendum No. 2 – Revised was written, it was anticipated that the pretreatment tank would be an asset owned by the municipality, and an easement would be granted to the municipality for installation and maintenance of the tank, which would include periodic removal of the solids. To negotiate this easement and location of the tank with each property owner will be potentially difficult. As noted, it may not be feasible in all cases to locate a tank on each property due to space constraints.

iii) Need for Headworks Building

One of the benefits of the Clearford sewer system would be an opportunity to delete any need for a headworks building at the sewage treatment plant. A headworks building removes all screenings and sand and grit from the raw sewage before further treatment. With the Clearford sewer system, the solids and sand and grit would be removed in the individual pretreatment tanks. However, unless there was 100% ability to service all properties with the pretreatment tanks, and in some cases this will not be possible, likely a headworks building will be required in any event.

iv) Cleanouts and Minimum Pipe Slopes

MOE has published minimum slopes based on sewer pipe size. For instance, the minimum slope for a 200 mm (8") diameter sanitary sewer is 0.4%.

The Clearford sewer system does not appear to have rigorous minimum slopes for drain pipes. As noted previously, zero or even negative slopes were originally contemplated for the Clearford sewer system as minimum solids content is proposed. However, Clearford subsequently confirmed that at least some slope on their drainage pipes would be required.

The Ontario Building Code, which covers plumbing in private buildings and on private property, indicates the minimum slope for a 100 mm diameter drain is 1%. As such, whether the sewer installed was a Clearford sewer system or conventional gravity sewers, the minimum slope would likely be at least 0.4% for pipes 200 mm diameter or larger, and slopes varying from 0.4% to 1.0% depending on pipe size for pipelines between 200 mm and 100 mm diameter.

As well, the requirements for cleanouts and access ports is somewhat undefined for the Clearford sewer system. MOE requires maximum distance between sewer manholes for conventional sewer systems to be 90 to 120 m. The Ontario Building Code requires cleanouts on 100 mm diameter sanitary pipes or storm drainage pipes every 15 m, and for pipelines larger than 100 mm diameter (125 or 150 mm diameter), no more than every 30 m.

As such, it would appear that an acceptable Clearford style sewer system would have cleanouts at least every 15 m if 100 mm diameter pipelines are used, or every 30 m if 125 or 150 mm pipes are utilized.

v) Sewer Depth

Originally, the Clearford style sewer system was identified to offer capital savings, in part due to the shallow length of bury. This is due to the fact that the Clearford pretreatment tank would not be buried deep enough to provide gravity service to building basements. In the case of Sauble Beach, most of the older buildings and cottages west of the Sauble Beach Parkway will not have basements due to high groundwater and the fact that all buildings are serviced by private septic systems.

Conventional gravity sewers normally are installed deep enough to service basements by gravity if economically feasible. For the established Sauble Beach area, west of the Sauble Falls Parkway, the sewers would not be deep enough for servicing of basements, though as noted, few basements likely exist in this area. Sanitary servicing of basements can always be provided by the homeowner installing a sewage pump in the basement and then pumping up to the main floor elevation.

As such, the cost difference for depth of bury between the Clearford style sewer system and a conventional gravity sewer system is essentially no different if the conventional gravity sewers are kept at the same, relatively shallow depth as contemplated for the Clearford style sewer system.

It should be noted that conventional gravity sewers also appear to have an advantage over the Clearford style sewer system where basement servicing is desirable as the conventional sewers can be installed deeper where required, though at higher cost.

Preliminary designs indicate that it is feasible to construct the conventional gravity sewer system deep enough on Main Street and some of the key side streets to service basements. Servicing of basements with the Clearfordstyle sewer system does not appear feasible in any case due to the fact the treatment tank would have to be buried so deeply to make it non-feasible, and also very difficult to provide regular servicing (cleanouts) of the pretreatment tank.

vi) Wastewater Quality

Theoretically, the Clearford style sewer system offers an advantage in that pretreatment of raw sewage is undertaken in the pretreatment tank. In the pretreatment tank, solids would drop out and anaerobic digestion of raw sewage would occur (similar to a normal septic tank) such that the septic tank effluent would feature reduced BOD and solids.

However, subsequent treatment of the septic tank effluent at the common treatment plant may be problematic due to:

i) potentially cold temperatures of the effluent during the winter, unless the pretreatment tanks are insulated;

ii) relatively low solids, low BOD and low carbon content and high nutrient content. Theoretically it is feasible to design and construct a treatment plant suitable for treating sepic tank effluent, though most treatment plants are not designed and constructed for this quality of effluent. Problems in the treatment of the septic tank effluent may arise.

2.3 Evaluation of Environmental Impacts, Social Impacts and Economic Impacts

Social Impacts

The conventional gravity sewer system would appear to offer a significant advantage over the Clearford style sewer system in terms of minimizing social impacts, as the need to locate a pretreatment tank on each individual property is eliminated. It is also possible that the private property owner will refuse to allow the pretreatment tank to be on their property, and even if the municipality has the legal right to locate the tank on the property, the political will to force placement of the tank on the property may be unavailable.

Potentially, there is an additional social impact with the Clearford style sewer system with the periodic cleaning out of the pre-treatment tanks. Pumpout of the pretreatment tanks would only be every 5 to 15 years with 10 years on average being identified by Clearford. As well, the pumpout could likely take place in the off season when tourist activity in Sauble Beach is minimal. However, there is still some social disruption that would be required during the pump out of the tanks.

The social impact of installing conventional gravity sewers is minimal except for disruption of streets during construction.

Environmental Impacts

In both cases, the sewer system would be installed on developed, public right of ways (with the exception of the Clearford style pretreatment tanks, which are normally located on private property). As such, the environmental impact of both sewer systems are considered the same, and in both cases, is considered minimal.

No significant environmental difference between the treatment plant required for the Clearford style sewer system and the treatment plant required for the conventional sewer system has been identified. In both

cases, with proper design and operation of the treatment plant, no impact on the receiving water is anticipated.

Economic Impacts

Table 5.4 from the original Addendum No. 2 – Revised is attached.

As noted on Table 5.4, Item 1 includes all costs (with the exception of contingencies and engineering) to install the Clearford sewer system. The total cost of the sewer component before engineering and contingencies was estimated to be $2,320,000 in 2007 dollars.

An evaluation of installation of 200 mm and 250 mm sanitary sewers, manholes, laterals, etc., is estimated to be $2,097,000 before restoration costs are included. Additional road restoration costs, which includes new granular B and granular A, and 50 mm of asphalt, is estimated to be approximately an additional $1.126 million.

Table 5.4-A provides the same costs with the gravity sewers included as Item 1.

With the higher cost of the conventional gravity sewers, which is due primarily to road restoration costs, the overall project cost increases to $9,861,000.

Note that the original cost in Table 5.4 of $948,000 for 6,700 m of collection pipe at $140/m assumes no appreciable road restoration costs, as it was assumed that the pipelines would be all located off the asphalt, as discussed previously in this report. In some cases, such as Main Street and potentially Sauble Falls Parkway, avoiding asphalt, curb and sidewalk, etc., on these urban streets will not be possible and costs provided in the original Table 5.4 do not include appropriate restoration costs, and as such, overall costs were likely underestimated to install the small bore sewer collection system.

As noted, there is additional value provided by the gravity sewer system in that at least the Main Street, commercial area sewers can be located deep enough to provide gravity service of basements. Gravity service of basements should also be possible on select side streets where groundwater levels, especially east of Sauble Beach Parkway, are low enough to allow servicing of basements. Many of these homes feature, more typically, year round, full time occupancy.

Prepared by:

Genivar Consultants LP

Jeff T. Graham, P.Eng.
Director – Urban Infrastructure
JTG/mmw

Table 5.4

Cost Estimate - Wastewater Collection System,

Pumping Stations, Forcemains and Wastewater Treatment Plant

Water and Sewage Works Study

Town of South Bruce Peninsula

December 5, 2007 105142

1.	Small bore sewer collection system 6,700 m of 150 mm ⌀ and 200 mm ⌀ polyethylene sewer pipe, settling tanks, service connections, etc.		
	A)	6,700 m of collection pipe @ $140/m	$948,000
	B)	356 tanks/and sewer connections @ $3,500 each plus 10% extra connections	$1,372,000
2.	Two Sewage Pumping Stations One 35 L/s and one 6 L/s. Equip each with backup generator.		$650,000
3.	250 mm ⌀ and 150 mm ⌀ forcemains. Total length of 3,700 m @ $220/m		$814,000
4.	Wastewater Treatment Plant		$3,025,000
5.	Land Costs		$250,000
	Subtotal		**$7,059,000**
	Add 15% Contingencies		**$1,059,000**
	Add 12% Engineering		**$847,000**
	Total Cost		**$8,965,000**

Servicing is for 356 units. Cost per unit is $25,182 per unit plus costs for home owner to hook up home to new clarifier tank on private property.

G:\2005\100\105142\Cost Estimate - WW Collection System, PS, Forcemains & WWTP.wpd

Table 5.4-A

Cost Estimate - Wastewater Collection System,

Pumping Stations, Forcemains and Wastewater Treatment Plant

Water and Sewage Works Study

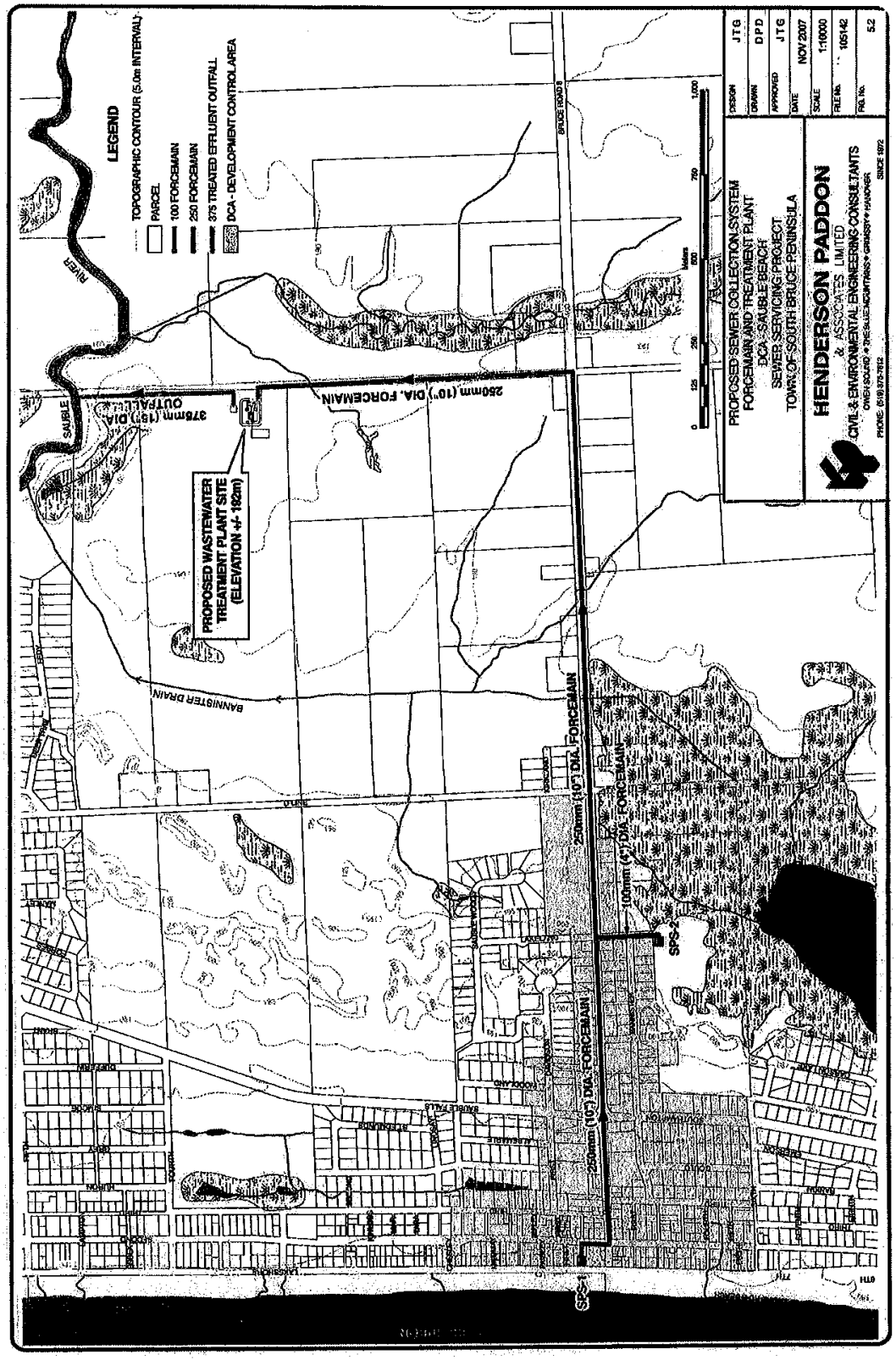
Town of South Bruce Peninsula

December 5, 2007 105142

1.	Conventional Gravity Sewer System 6,700 m of 200 mm ⌀ and 250 mm ⌀ gravity sewer pipe, manholes, service connections, etc.	
	A) 6,700 m of sewer at $312/m	$2,090,400
	B) Road restoration costs, 6,700 m length at $168/m	$1,125,600
2.	Two Sewage Pumping Stations One 35 L/s and one 6 L/s. Equip each with backup generator.	$650,000
3.	250 mm ⌀ and 150 mm ⌀ forcemains. Total length of 3,700 m @ $220/m	$814,000
4.	Wastewater Treatment Plant	$3,025,000
5.	Land Costs	$250,000
	Subtotal	**$7,955,000**
	Add Contingencies (as per Table 5.4)	**$1,059,000**
	Add Engineering (as per Table 5.4)	**$847,000**
	Total Cost	**$9,861,000**

Servicing is for 356 units. Cost per unit is $27,680 per unit plus costs for home owner to hook up home to new clarifier tank on private property.

G:\2005\100\105142\5.4-A Cost Estimate - WW Collection System, PS, Forcemains & WWTP.wpd


LEGEND
TOPOGRAPHIC CONTOUR (5.0m INTERVAL)
PARCEL
100 FORCEMAIN
250 FORCEMAIN
375 TREATED EFFLUENT OUTFALL
DCA - DEVELOPMENT CONTROL AREA
PROPOSED WASTEWATER TREATMENT PLANT SITE (ELEVATION +/- 192m)
375mm (15") DIA. OUTFALL
250mm (10") DIA. FORCEMAIN
250mm (10") DIA. FORCEMAIN
100mm (4") DIA. FORCEMAIN
250mm (10") DIA. FORCEMAIN
SPS-1
SPS-2
BANNISTER DRAIN
SAUBLE
BRUCE ROAD 19
PROPOSED SEWER COLLECTION SYSTEM
FORCEMAIN AND TREATMENT PLANT
DCA - SAUBLE BEACH
SEWER SERVICING PROJECT
TOWN OF SOUTH BRUCE PENINSULA
HENDERSON PADDON
& ASSOCIATES LIMITED
CIVIL & ENVIRONMENTAL ENGINEERING CONSULTANTS
DESIGN JTG
DRAWN DPD
APPROVED JTG
DATE NOV 2007
SCALE 1:10000
FILE No. 105142
DRG No. 5.2