KERR WOOD LEIDAL
consulting engineers

Greater Vancouver
200 - 4185A Still Creek Drive
Burnaby, BC V5C 6G9
T 604 294 2088
F 604 294 2090

Technical Memorandum

DATE: December 18, 2015

TO: **Dave Newman, Director of Engineering (Gibsons)**

FROM: **Catherine Simpson, Project Lead (KWL)**

RE: **Development Financing Options - Revised**
Town of Gibsons
Our File: 2132.022-300

1. Background

The Town of Gibsons (the Town) has requested support from Kerr Wood Leidal (KWL) in identifying tools and a funding scheme for recovering growth-related infrastructure costs through Town frond-ended infrastructure financing. This is specific to a series of sanitary infrastructure upgrades, including the Prowse Road Pump Station and forcemain leading to the wastewater treatment plant, according to condition and capacity. Improvement to these amenities is essential to ensure continued levels of service required to support future growth in the eastern portion of the Town, which makes up approximately half of the community.

Municipalities across Canada have developed creative means by which to leverage development capital to fund infrastructure required to support existing and future community members. The following technical memorandum identifies the development finance tools best suited to leverage funding of critical sewer infrastructure upgrades. Direction from the Town staff indicates that the optimal finance tool will provide for the immediate construction of the required public works by the Town, with municipal costs recovered through charges to new developments within the benefitting area.

The memo first outlines the unique context and preferences expressed by the Town and compares this context with a list of development finance tools available to BC municipalities. The finance tool best suited to the Town's parameters was identified, along with a funding scheme for cost recovery.

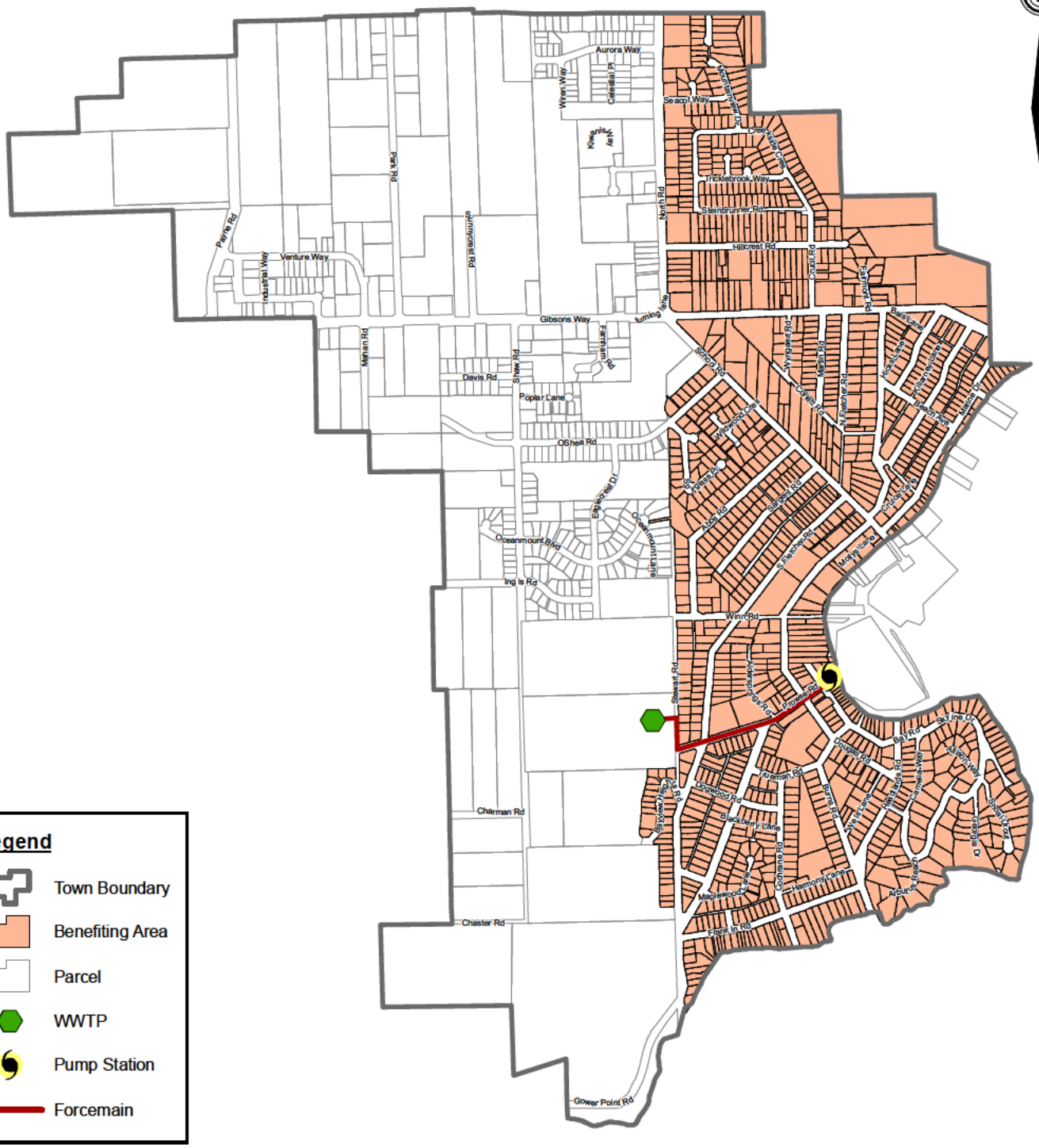
1.1 Benefitting Area

The Town is home to approximately 4,500 residents, approximately half of which are serviced by the Prowse Road Pump Station via a forcemain. Figure 1 illustrates the benefiting area for proposed capital works upgrades. It should be noted that this is the service area that will be in place following the upgrades, which varies slightly from the current service area of the Pump Station (specifically affecting the properties west of North Road).

1.2 Selection Criteria

Key priorities for selecting an appropriate development financing tool have been identified during meetings with Town of Gibsons staff. These priorities have been compiled to create criteria for tool selection. These criteria are detailed below:

Town Front-End Financed: Capital works are to be front-ended by the Town, with costs recovered over time.



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Town of Gibsons - Development Finance Options

Project No.	Date
2132-022	November 2015

300 0 300 (m)

Benefiting Area

Figure 1

Path: Q:\2100-2199\2132-022\430-GIS\MXD-Rpt\2132022_Fig1_BenefitingArea.mxd Date Saved: 11/10/2015 5:11:58 PM
Author: TSoh

Benefitting Area: Capital improvement costs to be recovered exclusively from new developments within the benefitting area.

Pre-emptive: Capital improvements will precede the connection of any new development to the sanitary system, as the current system is at capacity.

Urgency: The outlined capital works improvements are essential to provide continued service to existing properties and meet future demands of proposed developments. Avoiding delays to the construction or financing of this infrastructure is a top priority.

1.3 Development Potential

The Town's population has grown at a rate of just over 1% per year over the last 15 years. As of 2011, there were 2,015 dwelling units within the Town and an average of 2.1 people per household. Approximately 20 houses have been constructed per year from 2006-2011 based on building permit information. Future growth is expected as a mixture of both infill and greenfield development, to a total build-out capacity of 855 new residential dwellings in addition to limited commercial growth.

Looking more specifically at growth in the near future, the Town has several development proposals in the works within the benefiting area, any of which would necessitate the need for proposed off-site works and services prior to connection. Anticipated development potential in the benefiting area over a 15 year horizon is 257 residential dwellings and 10,000 m^2 of commercial floor area (specifically for the George Hotel). This is summarized in Table 1. This growth is based on pro-rated estimates from the Town, as provided in Attachment 1, and aligns with the DCC Bylaw update.

Table 1: Development Potential in Benefiting Area

	Development Potential
Residential	
Single Family	131 dwelling units
Townhouses	87 dwelling units
Apartments	38 dwelling units
Subtotal	**257 dwelling units**
Commercial	**17,800m^2 floor area[1] / 1,607 m^2 lot area**
Industrial	**Not applicable**

1.4 Capital Improvements

Improvements to the Prowse Road Pump Station and connecting forcemain, which serve roughly half of the Town, are required in advance of any new development. These improvements would address condition issues and permit the lift station to operate more efficiently and with improved capacity. The Town estimates that these improvements will cost approximately $1.8 million to construct.

- Prowse Road Pump Station Improvements: $623,000; and,
- Forcemain Rehabilitation $1,177,587.

[1] *In fact mixed use (commercial/residential), and includes a 125,000 ft^2 hotel, 63,000 ft^2 residences, and a 4,000 ft^2 restaurant on a total lot area of 73,000 ft^2*

This assumes that the forcemain is replaced prior to the pump station improvements. These estimates include an adjustment to the Prowse Road Pump Station estimate (originally prepared in 2014) to reflect an increased effort needed for dewatering, bypassing and shoring based on newly available information about the local ground/ground water conditions. The Forcemain Rehabilitation has two options for the Town's consideration: bursting or excavating; the higher of these estimates has been used above. A copy of these cost estimates are provided in Attachments 2 and 3.

It is understood that the Town intends to borrow, over a 15 year term, these costs. Appropriate debt servicing costs will need to be calculated, and the connection charge adjusted accordingly,

2. Cost Recovery Approaches

The BC *Local Government Act* provides for a number of methods through which local governments can recover costs associated with servicing areas experiencing development and growth. Under the *Act*, local governments are empowered to require developers to provide excess or extended services that not only serve the developer's lands but other developable land as well. This provides an essential mechanism for sustainable community development and planning into the future.

2.1 Finance Tools

The suitability of six development finance tools for financing the proposed capital improvements are summarized in Table 2. Given the Town's selection criteria, a sewer connection user fee is considered the most straightforward tool for recovering pump station and forcemain upgrade costs. Latecomer charges represent another technically viable option, though typically intended for developer front-ended cost recovery. Other options are described for consideration which would provide more flexibility to the Town, potentially less risk, and could be easier to administer.

Table 2: Summary of Infrastructure Finance Tools

	Description	Considerations
User Fees & Charges	• Fees or charges levied to municipal service users in order to recover municipal costs for operation, maintenance or extension of that service. • Charges must clearly reflect the cost of the specified service or growth-related infrastructure. • Requires a bylaw but not public assent.	• Considered the most viable and simplest option that meets all of Town's criteria. • A connection fee would levy charges only to new developers and would be confined to the sewer system benefitting area. • Existing connection fees could be amended to account for the projected capital cost of the proposed sewer system upgrades. • There is no time horizon limiting cost recovery.
Latecomer Charges	• One-time charges to property owners and/or new developers for connection to excess or extended on- or off-site services.	• Meets all of Town's criteria, though primarily intended for cases with developer front-ended financing.

	• Restricted to road, water, sewer and drainage works. • Costs can be front-ended by a developer or municipality, though tool is intended for use with developer front-ending. • Maximum 15 year horizon for recovering costs from new development. • Interest can be collected. • Requires neither a bylaw nor public assent.	• Charges can be tailored to new developers within the benefitting area.
Development Cost Charge	• One-time charges (per unit area) levied against new developments to compensate for growth-related infrastructure. • Rates vary according to land use categories. • Can be area-specific. • Implemented by bylaw or guidelines; does not require public assent however due process with consultation and approval by the Inspector of Municipalities is required.	• Meets all of Town's criteria, however this is not an option based on Staff direction, as some proposed developments within the benefitting area are too far along for the DCC update currently underway • Would only enable recovery of growth-related costs • Could include the proposed Sewer System capital works within a specified area.
Development Works Agreement	• An agreement under which a developer or municipality pays for a particular amenity as a condition prior to building permit approval. • Intended for use where the developer front-ends the development. • Requires a bylaw and public assent. • There is no time horizon limiting cost recovery.	• This tool is technically viable in that it is intended for financing particular capital works and levying charges to new development within a benefitting area. • However, it requires a bylaw and public assent period, which could cause project delays.
Local Improvement Tax	• Local improvements in an established area are front-ended by a municipality. • Cost recovery through parcel or frontage taxes on property owners within a benefitting area to recover costs for municipal service excess capacity. • Requires a bylaw and public assent.	• Not viable as taxation cannot isolate new developments.
Developer Front-End Financing	• Requirement for a developer to front-end the construction of public amenities as a condition for building permit approval.	• This is not an option based on staff direction, as several development proposals are current in stream.

More details regarding the most viable options for the Town: User Connection Fees as recommended and Latecomer Charges as originally identified by the Town, are provided in the subsections below.

2.2 User Connection Fee

User fees provide an important means for local governments to recover costs associated with service delivery from those who directly benefit from the service. Fees and charges must be clearly related to the cost of providing the specified service and are paid as a condition for service use.

Fees and charges can vary according to customer classes and land uses in order to ensure fair distribution of costs that reflects different degrees of use. Connection fees are one type of user fee and require users to pay a one-time fee as a condition for connection to that service. In this way, connection fees can apply to both connections to new developments or connections as a result of major renovations or subdivision of an established property. In both cases, however, they recover costs associated with increased demands on the respective system.

Legislation

User Fees are provided for under Section 194 of the *Community Charter (2003)* and can be levied to recover costs associated with all or part of a municipal service. A fee must be implemented through a bylaw and be directly related to the cost of service provision. While no public assent process is required for user fee approval, detailed information on how the fee is imposed must be available upon request.

Rationale

A connection fee is considered the most viable and easy to implement finance tool that satisfies all selection criteria and direction laid out by the Town of Gibsons.

Town Front-end Financed: User fees are intended for cost recovery by municipalities for the provision of municipal services. Furthermore, there is no time horizon limiting cost recovery; Connection fees can continue to be collected until Council selects to make amendments to the fee in the bylaw.

Benefitting Area: The bylaw amendment would provide for payment only by users within the sewer system benefitting area. Furthermore, as a connection charge, only new developments or significant renovations would be subject to pay the charge, thereby preventing any additional costs on existing system users.

Pre-emptive: Upgrades to the Prowse Road Pump Station and Forcemain capital works could begin immediately, with costs recovered once the bylaw has been amended and users begin to connect to the system.

Urgency: A connection fee amendment can be implemented without public assent, thereby avoiding considerable administrative delays to construction of the critical sewer infrastructure.

Case Studies

Three case studies have been selected to illustrate the implementation of connection fees by local governments in BC. Connection fees vary for each local government according to differences in system costs and the proportion of costs each community apportioned for repayment through connection fees.

City of Prince George

The City of Prince George's *Comprehensive Fees and Charges Bylaw (2013)* charges a one-time connection fee on a sliding scale based on the size of connection. Connection fees range from $4,000 for connections 100mm in diameter to $6,800 for connections 300mm in diameter. It also specifies a reduced fee of $3,250 for dual system connections of not more than 100mm in diameter. The City of Prince George's minimum connection fee of $4,000 is considerably higher than the Town of Gibson's existing 100mm connection fee of $920.

City of Prince Rupert

The City of Prince Rupert's *Sewer Regulations and Rates Amendment Bylaw (2014)* imposes a one-time sewer connection fee that is standard for all connection sizes but that increases by 5% per year. In 2013 the sewer connection fee was $2,011, which is set to increase to $2,330 by 2016. The Prince Rupert sewer connection fee is still considerably higher than that of Gibsons and indicates an example of incremental growth to account for inflation.

City of Fort St. John

The City of Fort St. John's *Sewer Regulation Amendment Bylaw (2014)*, provides a connection fee structure which requires users to pay 100% of the cost of sewer service connection and restoration, plus applicable taxes, to a minimum of $2,000. This fee structure is similar to that reflected in the Gibsons *Sanitary and Storm Sewer Connection Bylaw*, which specifies the higher of either a $920 connection fee *or* actual costs of connection. This fee structure is ideal for covering the costs of the service provision itself, but is insufficient to cover any additional upgrades to the sewer system, as proposed for the Prowse Road Pump Station and forcemain.

2.3 Latecomer Charges

A Latecomer Charge is a development finance tool that allows for the recovery of costs as a condition for using or connecting to an amenity such as sewer infrastructure. This cost recovery tool involves levying a one-time charge to new development serviced by the new amenity when a connection is made to the service. Latecomer charges have a maximum implementation horizon of 15 years.

In most cases, latecomer charges involve an agreement between a municipality and a developer, in which the developer agrees to pay for and construct particular public works as a condition for receiving a development permit. This means that agreements are formed on a situation by situation basis. The municipality, in turn, agrees to charge a "latecomer fee" to all new developers or property owners upon connection to the improved service, and to transfer this income as repayment to the developer overtime.

Though latecomer charges typically involve developer front ended capital works, the *Local Government Act* indicates that latecomer charges can also be levied to recover costs from municipal front ended works. Under this circumstance, latecomer fees would be collected and retained by the municipality to recover their own costs, rather than redirected to repay a front ending developer.

A Latecomer Agreement identifies the costs of constructing the amenity as the cost to be recovered by the developer over a fifteen year period. The agreement expires after this fifteen year period and the municipality is no longer able to charge latecomer fees to new residents nor are they responsible for repaying any outstanding costs outlined in the agreement.

Legislation

Latecomer Fees are provided for under Section 939 of the *Local Government Act (1996)* and can include sewage infrastructure and service extensions. While the legislation states that either local governments or

the developer can be responsible for the service extension, few precedents exist in which a municipality has covered service extension costs under these circumstances.

As outlined in Section 939(6), where a municipality pays all or part of the costs of service extension, it can recover costs by way of a development charge, tax or a user fee and may collect interest. Latecomer payment agreements can be implemented without an overarching bylaw or public assent.

Rationale

A latecomer payment program is one of the available development finance tools, and satisfies all selection criteria and direction laid out by the Town.

Town Front-end Financed: Provisions under the *Local Government Act* allow local governments to finance all or part of service extension subject to a latecomer agreement.

Benefitting Area: Latecomer charges are applied only to service connections for new developments within the benefiting area.

Pre-emptive: A latecomer payment program would allow for the immediate improvement of the Prowse Road Pump Station and forcemain, with cost recovery as a condition for connection to the system. Capital works improvements would therefore precede new development connection to the sanitary system

Urgency: A latecomer charge program can be implemented immediately and without public assent, thereby avoiding considerable administrative delays to construction of the critical sewer infrastructure.

Case Studies

Three case studies have been selected to illustrate the implementation of latecomer programs by local governments in BC. All three cases, however, illustrate programs targeted at developer front-ended extensions. No examples have been uncovered for latecomer programs intended for municipal front-ended extensions, nor programs that provide the flexibility for either municipal or developer front-ending.

District of West Kelowna

The District of West Kelowna provides a policy manual to guide the implementation of their latecomer program for developer front-ended service extensions. The manual indicates a number of conditions for property exemption from Latecomer Charges, including where lands already connected to a highway or already fronted on a municipal main prior to the date of a Latecomer Agreement or in special cases. The manual details the methods used in calculating Latecomer Charges based upon: a) actual construction costs; b) design and inspection costs; c) land or rights-of-way acquisition costs incurred outside the developer's land; and d) specialist consulting services. Interest on charges will be compounded annually (Bylaw NO. 0145) and repayments will end 15 years after effective date or when all costs have been recovered. The specification of properties exempt from latecomer charges provides on example of how the Town of Gibsons could tailor their own agreement to exempt certain properties according to their characteristics and proximity to existing amenities.

City of Coquitlam

The City of Coquitlam's latecomer program is guided by a Policy and concise Procedure Manual outlining latecomer agreement application requirements and processes. Charges are due prior to the issuance of a building permit, subdivision plan or service connection. Repayment to the front-ender occurs annually up to 15 years after the agreement effective date or once all eligible costs have been repaid. Under this Manual, properties within a benefitting area subject to a Latecomer Agreement may apply to waive the Latecomer Charge prior to finalizing the Agreement. This provision indicates an example where a latecomer agreement can allow flexibility in the application of charges on a case-by-case basis. A similar

provision could be implemented by the Town of Gibsons to further tailor their own latecomer charge agreement to certain types of development.

Township of Langley

The Township of Langley's *Latecomer Policy: User Manual (1988)* details the design and implementation of their Latecomer Charge Program. The User Manual outlines a number of best practices that have been referenced in the Provincial Government's Development Finance Choices Guide (2000). The Manual recommends that formal agreements be established in all cases and that property owners be notified of latecomer charge requirements, even where not required by the Local Government Act. It also recommends that local governments calculate benefitting area and levels of charge themselves when establishing the conditions of the agreement, in order to protect against liability.

3. Rate Calculation

Cost recovery using a connection fee model will require the Town to amend its existing *Sanitary and Storm Sewer Connection Bylaw* so that the sewer system connection fee reflects the added cost of upgrading the Prowse Road Pump Station and forcemain. A method for calculating the additional per user connection fee has been selected for the Town's consideration, with preliminary calculations given available information. Additional refinements to the calculation may be required upon confirmation of actual construction and interest costs.

3.1 Method

The cost of proposed works to be added to an existing connection fee are based on the actual cost of the infrastructure required to serve proposed upgrades. To implement a connection fee, three steps are required:

1. Determine the proportion of the infrastructure cost which constitutes the excess or extended service
2. Determine the benefit of the excess or extended service to each parcel of land that will be served
3. Amend the existing *Sanitary and Storm Sewer Regulation Bylaw* to reflect the updated sewer connection fees to be imposed on all users within the sewer system benefitting area for new connections to the system.

There are a number of different methods which could be used determine the benefit of service on subject lands such as:

- a per hectare charge based on the eligible cost of the works, divided by the total benefitting area
- a per meter charge based on the eligible cost of the works, divided by the total amount of the benefitting frontage
- a formula based on equivalent development units of various land uses, where the benefit and cost do not translate equitably on a frontage or area basis

For the purposes of this project, and given the information available regarding development potential, an equivalent development unit calculation was used.

3.2 Calculation

The proportion of the infrastructure cost which constitutes the additional connection fee charge has been identified as **$1.8 million** for Prowse Road Pump Station and forcemain improvements, which includes applicable engineering costs.

The benefit to each parcel of land that will be served has been identified based on population equivalents according to projected development potential within the benefiting area over the next 15 years. **724 population equivalents** have been identified, as described in Table 3.

Table 3: Population Equivalents

	Development Potential	Density	Population Equivalents
Residential			
Single Family	131 dwelling units	2.18 ppl/du	**286**
Townhouses	87 dwelling units	2.18 ppl/du	**190**
Apartments	38 dwelling units	1.90 ppl/du	**72**
Commercial (mixed use)	73,000 ft^2 lot area	260 PE/ha*	**176**
Industrial	Not applicable	--	**--**
TOTAL			**724**
** based on the uses identified for the site as noted in Section 1.3*			

The formula for calculating the unit sewer connection charge is as follows:

Unit Sewer Connection Charge = Capital Cost / Projected Population Equivalents

The preliminary unit sewer connection charge in relation to the benefit determined has been calculated as **$2,487per population equivalent.** This assumes that all project costs will be recovered from new development. This calculation does not include debt servicing costs, other interest or administrative costs, which should be considered further by the Town.

The resulting charge per population equivalent should be multiplied by the projected growth expected for any particular development.

3.3 Implementation

An owner of land located within the benefitting area is expected to pay, at the time of building or access permit, subdivision approval or application for service connection, the unit Sewer Connection Charge multiplied by the benefitting population equivalent, plus interest. According to the *Community Charter (2003),* changes to a connection fee must be reflected through an amendment to the existing bylaw.

Attachments

The following attachments have been included in reference to this technical memorandum:

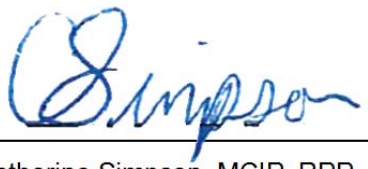
1. **Planning Estimate for Growth (Gibsons, 2015)**
2. **Pump Station Cost Estimate - Revised (KWL, 2015)**
3. **Forcemain Cost Estimate (KWL, 2015)**

KERR WOOD LEIDAL ASSOCIATES LTD.

Prepared by:

Robin Lattimer
Junior Planner

Reviewed by:



Catherine Simpson, MCIP, RPP
Strategic Asset Management Specialist

RNL/jc

Statement of Limitations

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This document represents KWL's best professional judgement based on the information available at the time of its completion and as appropriate for the project scope of work. Services performed in developing the content of this document have been conducted in a manner consistent with that level and skill ordinarily exercised by members of the engineering profession currently practising under similar conditions. No warranty, express or implied, is made.

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Revision History

Revision #	Date	Status	Revision Description	Author
1	2015-10-02	Final	Submitted	RNL
2	2015-12-18	Revised	Submitted	RNL

OQM | Organizational Quality Management Program

Attachment 1

PLANNING MEMO

TO: Catherine Simpson, KWL **FILE NO:** 5340-11 Prowse Road

FROM: André Boel **DATE:** September 29, 2015

SUBJECT: **Expected development in catchment area**

Goal
To provide an estimate of new development within the catchment area of the Prowse Road lift station for the next 15 years.

Residential Growth in catchment area:

The numbers below are based on another recent estimate on buildout potential for the DCC bylaw update. Numbers have been adjusted to reflect the catchment area only.

The population of Gibsons has grown at a rate of just over 1% per annum over the last 15 years. As of 2011, there were approximately 2015 dwelling units within the Town, with an average of 2.1 people per household. An analysis of Building Permit information indicates that from 2006-2011, there were on average 20 houses constructed per year.

The Neighbourhood Plan areas have greenfield capacity for population growth, as seen in the table below. The remainder of Gibsons, excluding the neighbourhood plan areas has capacity available in the form of infill housing.

Table 1: Buildout capacity for New Residential dwellings

Area	Capacity (2014) approx.	Approx. number of SFD	Approx. number of Townhouses	Approx. number of Apartments
Harbour Area Plan	700	308	274	118
Upper Gibsons Neighbourhood Plan	Not in catchment area			
Gospel Rock Neighbourhood Plan	Not in catchment area			
Gibsons, other areas (50% in catchment area)	155	130	15	10
Total	**855**	**438**	**289**	**128**

Table 2: 15 year estimate for New Residential dwellings

Area	15 year buildout approx.	Approx. number of SFD	Approx. number of Townhouses	Approx. number of Apartments
Harbour Area Plan	210	92	82	35
Upper Gibsons Neighbourhood Plan	Not in catchment area			
Gospel Rock Neighbourhood Plan	Not in catchment area			
Gibsons, other areas (50% in catchment area)	47	39	5	3
Total	**257**	**131**	**87**	**38**

(based on 30% of full buildout)

Commercial and Industrial Growth in Gibsons:

Gibsons has a limited supply of industrial and commercially zoned areas. In the catchment area very little new commercial development is expected. The number of 10,000 m2 is based on the size of the George Hotel and / or smaller incremental additions to the exisiting commercial floor area.

Table 2: Capacity for new commercial and industrial development

Zone	Parcel Size	Maximum footprint
Commercial	Negligible	10,000 m2
Industrial	Not applicable	0

Vacant land in Gibsons

The map attached has been created to show vacant parcels and their current zoning, excluding the neighbourhood plan areas. Vacant parcels are outlined in bold, and is defined as "Vacant (AUC) Actual Use Code" in the Legend. Buildout numbers for these areas are included in table 1 and 2.

Metadata

The approximate capacity in table 1 was found through using Official Community Plan data, including the following tables:

- Figure 5.1 of the Harbour Area Plan

The Official Community Plan does not provide numbers for areas outside the Plan areas, therefore the map showing Vacant land in Gibsons was used to find the total number of vacant parcels per zone. All commercial and industrial zoned lands were added together to provide the data in Table 2.

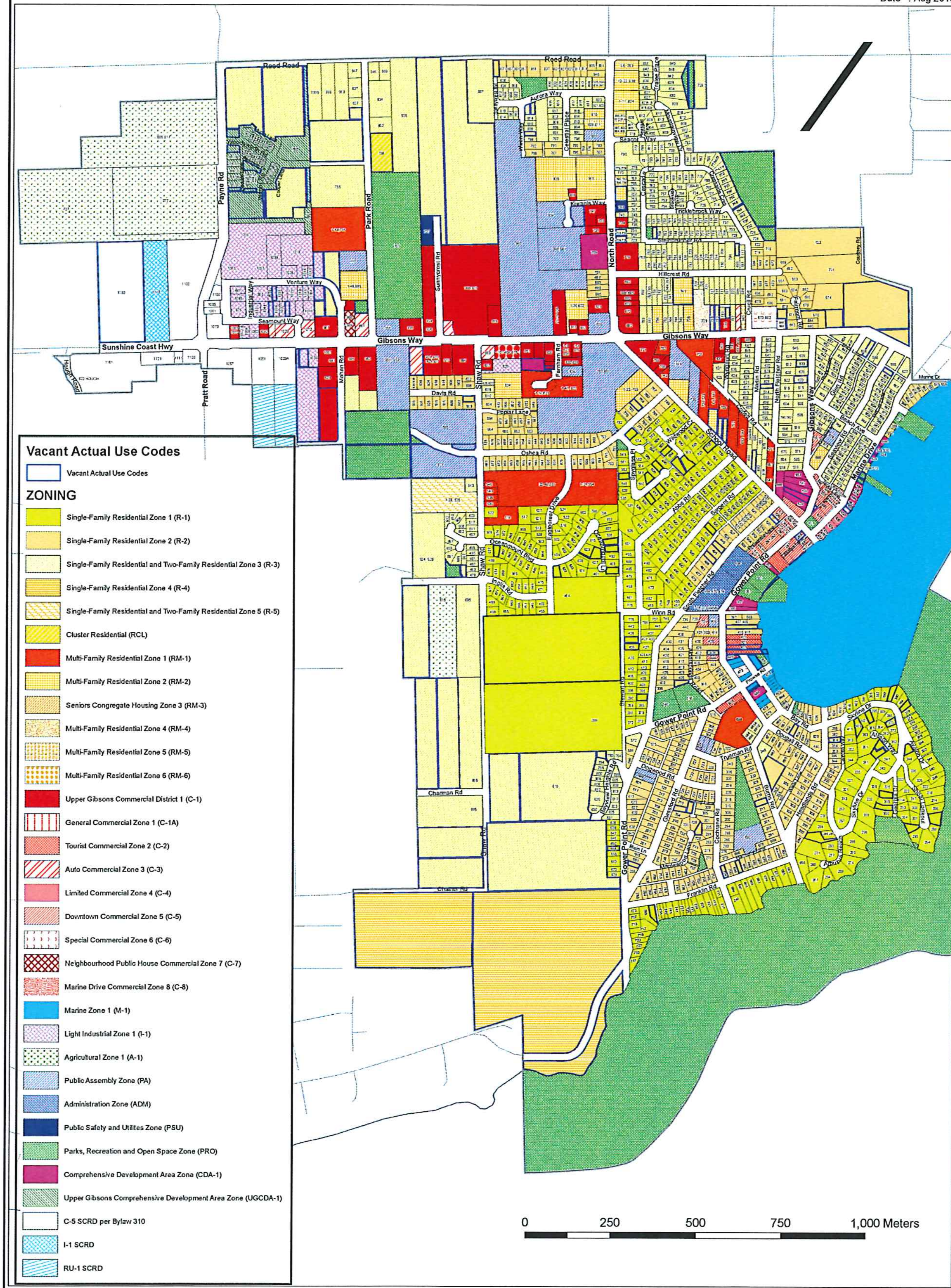
The areas for residentially zoned lands were divided into single family detached and multifamily – the multifamily was then divided once more for a 70/30 split to find the area of units for townhouses and apartments. Staff used the densities from the RM-2 zone to find the unit numbers for apartments and Townhouse.

The original buildout estimate had an expected timeline of approximately 80 years. For the catchment area it is estimated that full buildout would occur within the next 50 years. For this memo's estimate, the numbers have been pro-rated (15 years divided by 50 years) to assess the next 15 years of buildout for the area.

Vacant - Actual Use Codes Overlying Current Zoning

TOWN OF GIBSONS

File No.: 20150802
Date : Aug 2015



Attachment 2

Town of Gibsons

Item	Description	Materials				Labour & Equipment				Line	Comments
		Unit	Quantity	Unit $	Total	Unit	Days	Unit $	Total	Subtotals	
1	**General Requirements**										
1.01	Bonding & Insurance	L.S.							2.0%	$7,185	
1.02	Mobilization & Demobilization	L.S.							5.0%	$17,961	
	Task 1 Subtotal									$25,146	
2	**Site Work**										
2.01	Site Clearing and Grubbing	21(1) FOIPPA									21(1) FOIPPA
2.02	Bypass piping										
2.03	Bypass Piping Setup/remove										
2.04	Bypass pumps										
2.05	Dewatering										
2.06	General Excavation & Backfill										
2.07	Shoring										
2.08	Forcemain Tie-in										
2.09	Traffic Control										
2.10	Site Restoration										
	Task 2 Subtotal									$189,336	
3	**Concrete**										
3.01	Concrete Benching Work	21(1) FOIPPA									
3.02	New Reinforced Concrete Lid										
	Task 3 Subtotal									$40,000	
15	**Mechanical Work**										
15.01	Station Mechanical Piping	21(1) FOIPPA									
15.02	Valve Chamber Incl. Valving and Piping										
15.03	Metal Work										
15.04	Access Hatch Cover										
	Task 15 Subtotal									$79,292	
16	**Electrical Work**										
16.01	Upgrade of Pump Control Panel, SCADA Control Panel, Ventilation Fan, and Configuration to Town of Gibsons Requirements	21(1) FOIPPA									
16.02	Pump Station Commissioning										
	Task 16 Subtotal									$50,598	
	Item Total									**$384,372**	
	Engineering and Construction Management								25%	$96,093.12	
	Contingency								30%	$115,311.74	
	Inflation 2014-2015								3%	$11,531.17	
	Environmental Monitoring	L.S.	1	$15,000	$15,000	incl.				$15,000	
	TOTAL ESTIMATED COST (Excl. GST)									**$623,000**	

This estimate has been based on items shown on the tender set and reflects an estimate of the expected low tender price for use in evaluation of tenders. As such, a suitable contingency should be added for use for other purposes. The unit prices, production rates and crew rates reflect KWL's recent experience with similar work, and therefore represent the best prediction of actual (2015) costs as of the date prepared. Actual tendered costs will depend on such things as market conditions generally, competiveness of the tendering process, remoteness factor, the time of year, contractors' work loads, any perceived risk exposure associated with the work, and unknown conditions.

Prepared by:

PROFESSIONAL ENGINEER
PROVINCE OF BRITISH COLUMBIA
K. MUELLER
31278
2015 12 17

Seal

Attachment 3

2132.020
Township of Gibsons

Prowse Rd Forcemain Replacement
Cost Opinion for Forcemain Replacement by Excavated Replacement
14/12/15

Class 'D'

Item	Description	Unit	Estimated Quantity	Material Unit Rate	Material Cost	Crew	Crew Rate $/day	Duration (Days)	LabourEquip Cost $	TOTAL PRICE $	Comment
1	General										
1.01	Bonding and Insurance	21(1) FOIPPA									
1.02	Mobilization and Set up, Demobilization										
	Subtotal									$56,273	
2	Bypass										
2.01	Bypass piping	21(1) FOIPPA									
2.02	Bypass Piping Setup/move										
2.03	Bypass pumps										
	Subtotal									$44,414	
3	Forcemain Replacement										
3.01	Excavate new 250mm C900 PVC FM	21(1) FOIPPA									
3.02	Dewatering										
3.03	Tie-ins										
3.04	WWTP Equilization Tank										
	Subtotal									$659,000	
	SUBTOTAL ITEMS 1 TO 3									$759,687	
	Engineering & Construction Management								15%	$114,000	
	Contingency								40%	$303,900	
	TOTAL AMOUNT (excl. GST)									$1,177,587	

This estimate has been based on items shown on the tender set and reflects an estimate of the expected low tender price for use in evaluation of tenders. As such, a suitable contingency should be added for use for other purposes. The unit prices, production rates and crew rates reflect KWL's recent experience with similar work, and therefore represent the best prediction of actual (2015) costs as of the date prepared. Actual tendered costs will depend on such things as market conditions generally, competiveness of the tendering process, remoteness factor, the time of year, contractors' work loads, any perceived risk exposure associated with the work, and unknown conditions.

Prepared by:

PROFESSIONAL ENGINEER
PROVINCE OF BRITISH COLUMBIA
K. MUELLER
31278
2015/12/17
Seal

KERR WOOD LEIDAL ASSOCIATES LTD.
Consulting Engineers

2132.020
Township of Gibsons

Prowse Rd Forcemain Replacement
Cost Opinion for Forcemain Replacement by Pipe Bursting
14/12/15

Class 'D'

Item	Description	Unit	Estimated Quantity	Material Unit Rate	Material Cost	Crew	Crew Rate $/day	Duration (Days)	LabourEquip Cost $	TOTAL PRICE $	Comment
1	**General**	21(1) FOIPPA									
1.01	Bonding and Insurance										
1.02	Mobilization and Set up, Demobilization										
	Subtotal									$54,798	
2	**Bypass**										
2.01	Bypass piping	21(1) FOIPPA									
2.02	Bypass Piping Setup/move										
2.03	Bypass pumps										
2.04	Bypass Linestops										
2.05	Bypass Fitting on new FM										
	Subtotal									$140,578	
3	**Forcemain Replacement**										
3.01	Pipe Burst new 250mm HDPE FM	21(1) FOIPPA									
3.02	Dewatering										
3.03	WWTP Equilization Tanke										
	Subtotal									$544,400	
	SUBTOTAL ITEMS 1 TO 3									**$739,776**	
	Engineering & Construction Management								15%	$111,000	
	Contingency								40%	$295,900	
	TOTAL AMOUNT (excl. GST)									**$1,146,676**	

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Prepared by: