

The Sechelt Carbonate Project Sechelt, B.C.

**Project Description Submitted to the
British Columbia Environmental Assessment Office**



**Pan Pacific Aggregates Ltd.
1580 – 1100 Melville St., Vancouver, B.C. V6E 4A6
Tel: 604.637.7581, Fax: 604.689.2669
info@panagg.com**

**PROJECT DESCRIPTION – SECHELT CARBONATE PROJECT
SECHELT, BRITISH COLUMBIA**

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1. INTRODUCTION

The Pan Pacific Aggregates Carbonate Project (the "Project") represents the potential development of a large carbonate rock resource to produce high quality chemical (calcium and magnesium) rock for export to the coastal city markets of North America, particularly California.

A production capacity of approximately 4 - 6,000,000 tonnes per annum is envisaged with all products leaving the site in 6,000 tonnes capacity barges that will be loaded at a dedicated facility to be constructed on the adjacent foreshore. At the proposed production rate the Project will have a minimum operational life of 25 years.

The Project is located on the Sechelt Peninsula approximately 15 km north of the community of Sechelt along the central axis of the Sechelt Peninsula, known as the Caren Range, between the Strait of Georgia and Sechelt Inlet and will be connected to the nearby foreshore facility on Sechelt Inlet by conveyor. The site covers approximately 670 hectares for biophysical study and investigation of land that was mostly clear-cut logged in the 1970's. The Project Area covers approximately 215 hectares within the biophysical study area.

Chemical rocks are produced from limestone and dolomite and are natural materials that are benign to the environment. Their production utilizes only physical processes, principally crushing, screening (sizing) and washing, with no chemicals involved. Chemical rocks are the principal sources of calcium and magnesium. Limestone is primarily used for the manufacture of lime, Portland cement and aggregates and is also used in steel making, water purification, sewage treatment, as a soil conditioner, in asphalt shingles as a filler, acid neutralization, the manufacture of paper, glass, paint, in food processing, and pharmaceuticals. Dolomite is used as a refractory / flux in steel making, for fillers, soil conditioning, adhesives, coatings, glass making (sheet glass) and aggregates.

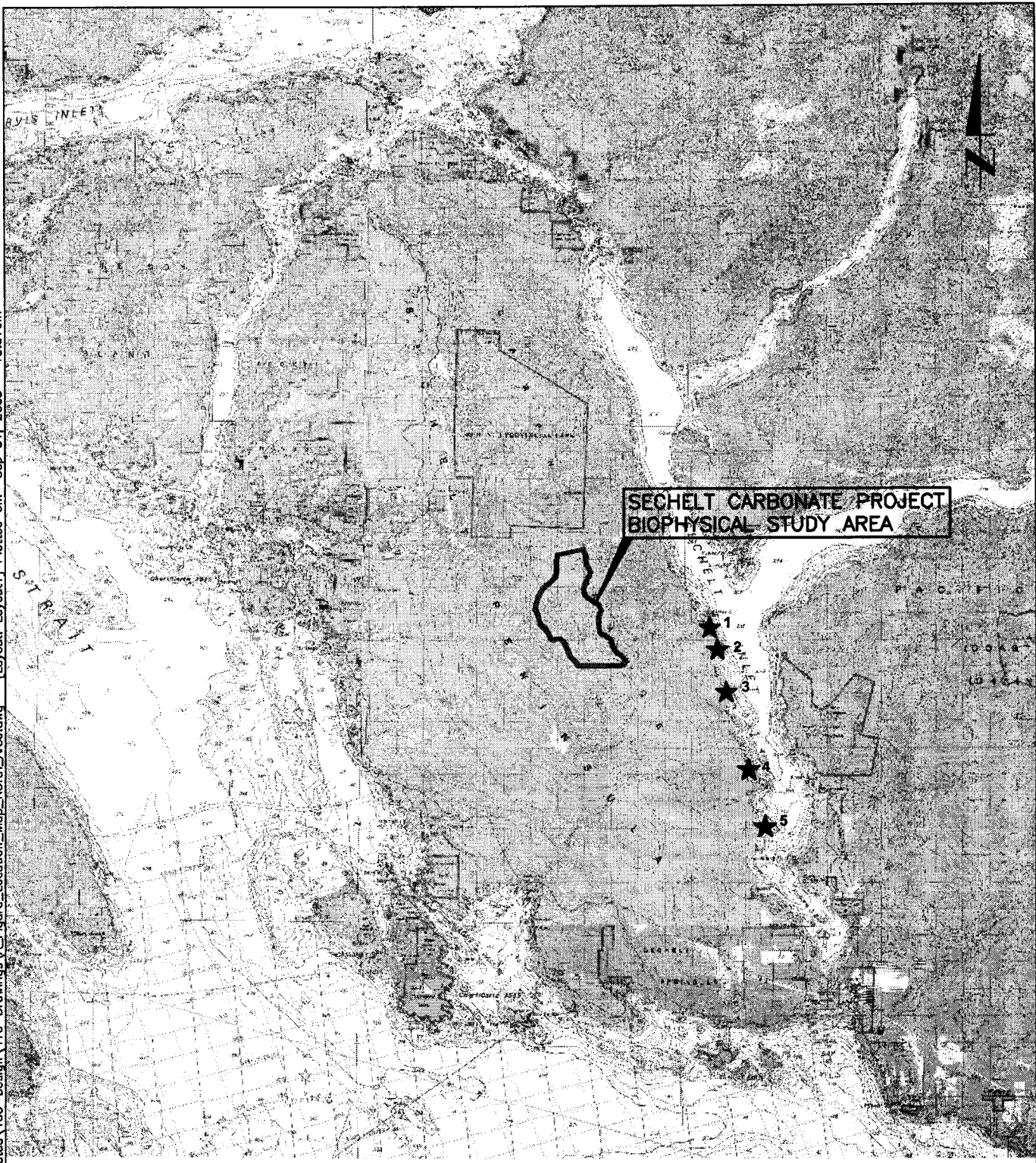
2. LOCATION

The site lies approximately central to the Sechelt Peninsula alongside the Halfmoon Bay Forest Service Road, from which there is easy access. It is 15 km North of the community of Sechelt, an industrial and logging town on the Sunshine Coast of British Columbia. The proposed processing plant area lies to the south end of the Project area. Products will be transported by conveyor to stockpiles adjacent to the process plant and then to the barge load-out facility that will be situated along the Sechelt Inlet. The barge load-out facility will be located on tidewater within Sechelt Inlet, a deep navigable channel used extensively for log booming, barge transport and general commercial traffic.



The general location of the Project is shown on the following map and in greater detail on the attached plan that is based on the area Trim map. The site is located in UTM Zone 10 and the coordinates of the approximate centre of the mineral resource are: 435 500E, 5 549 000N.

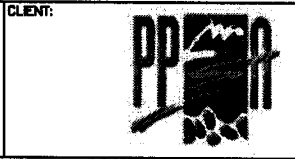
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LEGEND:

★ BARGE LOADING SITES

APPROXIMATE SCALE 1:200,000 0 10km



PROJECT:
PAN PACIFIC AGGREGATES EIA

TITLE:
LOCATION MAP

DILLON PROJECT NUMBER: 05-4040	CLIENT PROJECT NUMBER: -
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3. THE PROPONENT: PAN PACIFIC AGGREGATES LTD.

Pan Pacific Aggregates Ltd. (PPA) is a private British Columbia company based in Vancouver, which was incorporated in December 2004 specifically to pursue the establishment of a coastal industrial minerals export business.

While PPA is presently deemed to be the Project proponent, it is anticipated that a single purpose company will be incorporated that will become the definitive Project applicant under the BC Environmental Assessment Act (BCEAA). This new company would hold the Project interests on behalf of PPA and, possibly, its First Nation partner.

PPA's business plan anticipates the development of a large chemical rock resource to be complementary to other industrial mineral developments. The markets for chemical rocks are diverse and localized with distinct material preferences based on the intended application or more often simply based on custom and practice. Therefore, PPA intends to evaluate multiple projects in the future, which will allow PPA to offer a broader product line that is mutually beneficial for the longer-term success of the business, as market preferences are a powerful factor.

The major coastal cities of California were fortunate to have extensive local resources of industrial minerals that were consumed in vast quantities for their growth and development. It is these resources that are now rapidly approaching depletion, or have been sterilized by urban development, and this situation is creating the opportunity for exports from British Columbia.

PPA's directors and officers are all highly experienced mineral resource industry executives who have been responsible for the evaluation, planning, financing, development and management of many mining operations around the world, including dedicated industrial mineral production facilities. The company has the experience to carry the Project through from conception to production.

4. FIRST NATIONS' INVOLVEMENT

The Project lies within the asserted territory of the Sechelt Indian Band (SIB). PPA has shared its ideas for the Project in an open and constructive way with the First Nation and considers the relationship with them to be extremely important. The development of the operation would offer considerable economic benefits for the community.

PPA and SIB executed a Memorandum of Understanding (MOU) on October 14, 2005 with a view to developing a solid business relationship. This will enable SIB to complete an independent Project due diligence once PPA has completed conceptual engineering for the Project during the early part of 2006.



It is anticipated that a joint venture type of agreement will be entered into. The First Nation will have the opportunity to participate in the development of detailed operating and environmental mitigation plans which will be completed as site investigations advance.

5. PROJECT DETAILS

5.1 Operations

Of the 670 hectares of land associated with the Project, the potential mineral extraction area totals approximately 215 hectares including extraction area, processing plant, product stockpiles and 50 hectares for the barge load-out and conveyor. It is anticipated that only a portion of this area will actually be used for operations, however, the exact area will not be determined until detailed engineering has been completed. The remainder will be undisturbed margins and easements left around the site to either screen the operations from view or protect features such as small lakes, watercourses and wetlands.

The Project is in the advanced exploration stage. Full feasibility study is in preparation and is expected to be completed early in 2006 and will include preliminary plant design based on the characteristics of the resource to be exploited. Equipment selection and process flow sheet will be developed as part of the feasibility study. However, a general description of the expected process follows.

The first stage of operations would be to clear an initial area of second growth forest cover and then to carefully remove all the organic overburden layers for separate storage and later use in reclamation. Having exposed the limestone and dolomite, this will then be extracted by drill and blast quarry type operations, moving the broken rock from the quarry face using mobile plant, such as a front shovel and large rock trucks, to deliver the "pit-run" material to the processing plant.

Processing involves crushing, screening (sizing) and in some instances washing. Product specifications include both unwashed "run of crusher" and washed materials. Some customers will receive "run of crusher" material that includes fine particle sizes and other customers will require washed rock products that do not include fine material.

When washing is required the fine by-product is classified and dewatered to remove silt-sized fractions, with the wash water being sent to sedimentation ponds for final settling out of any silt and recycling of the water. The primary source of the process water will be natural precipitation retained in the settling ponds. Any additional make-up water required during dry summer periods will be obtained from boreholes within the resource area and quarry de-watering. The clean rock products will then be conveyed to a stockpile area adjacent to the process plant to await loading onto a barge. The most



advantageous aspects of this Project are that the site lends itself to progressive reclamation of the land back to productive forest cover.

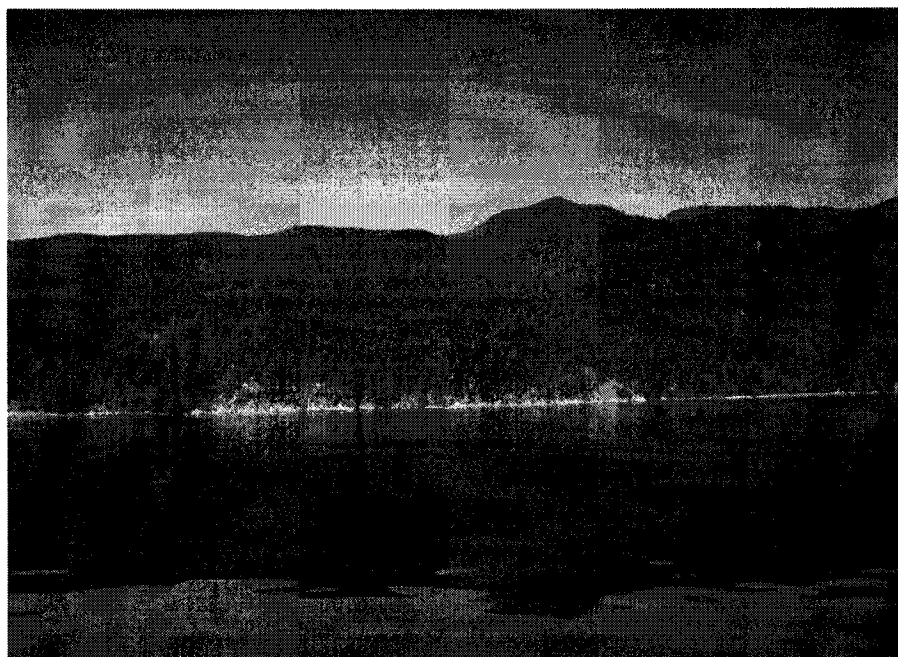
The production operations will be carried out on a two-shift basis totaling 16 hours per day and up to seven days per week. There will be no nighttime production. The operation is unlikely to produce during the weekends but must have the flexibility to do so to meet market demand.

5.2 Transportation and Infrastructure

All products will leave site in ocean-going barges and therefore the only impact on the local road network will be from employees traveling to work and the delivery of essential equipment and materials such as fuel and engineering parts. Given the site's location the Project's road traffic will have little or no impact in the local area.

At maximum production rates the operation will expect to load four barges per day with each being at the barge load-out for up to 4 hours. Barge loading will take place at irregular hours, around the clock, as barge movements will be dictated by tide conditions in Skookumchuck Narrows.

Five potential barge load-out locations have been identified on Sechelt Inlet and are shown on the attached map. The final choice for barge load-out location will not be made until tidal and sub-tidal surveys have been completed in late September and archaeology and Traditional Use Studies have been completed by SIB in November. The photograph below shows potential Site #3. Criteria for site selection are high rock bank, deep water, a relatively sterile sub-tidal zone, and slopes of less than 20% between the proposed plant site and the proposed barge load-out site.



*Proposed Barge Load-out Site #3
(Looking West)*

The nearby communities of Sechelt, Gibson's, Roberts Creek, Halfmoon Bay and Pender Harbour have ample temporary accommodation to meet all requirements during construction and therefore there will be no requirement to provide a construction camp on the site or any other residential facilities at any time.

5.3 Tenure

The Project is located on Mineral Claims held by Pan Pacific Aggregates Ltd. and wholly owned sister company Global Industrial Services Ltd. on the Sunshine Coast within the New Westminster Mining Division. The site is also within Terminal Forest Products Sunshine TSA, Forest License A19229.

PPA selected the Carbonate site for the following principal reasons:

- The chemical rock is adjacent to navigable tidewater suitable for large barges having a capacity of up to 6,000 DWT.
- The site lends itself to minimizing effects on the environment. There are no close habitations and the site itself contains limited fish habitat streams. Logging has already taken place over the entire Project area.
- The topography of the site is ideal for the intended purpose.



- The quality of the limestone and dolomite exceeds all specification requirements of target customers.
- Relationship with the First Nation, in whose traditional territory the Project lies, is extremely positive. The property is not believed to have significant cultural or traditional use values.
- Sechelt and its surrounding area has an established industrial base offering a labour force and all necessary services and presently is seeking new diversified industries to reduce the dependence on the economically depressed logging and fishing industries.

5.4 Geology And Topography

Geology

The Sechelt Peninsula is located along the western edge of the Coast Plutonic Complex. This complex is an elongate 1700 km x 100 km, northwesterly trending belt comprised primarily of granodiorite and quartz diorite units that intruded older sedimentary and volcanic rocks (lower-cretaceous Gambier Group, upper Triassic Karmutsen Formation and Jervis Group). The emplacement of the successive intrusive plutons took place over an extended period of geologic time beginning in the late Jurassic. The Jervis Group volcanics and carbonates found in the Project area are elongate roof pendants that unconformably overlay the late-Jurassic / early-Cretaceous diorites and quartz-diorite plutons. Some of these roof pendant rocks have been locally metamorphosed and range from sub-greenschist to amphibolite in grade. A final phase of multiple dyke intrusions took place within these rocks.

During June and July 2005, PPA completed a diamond drill program on the property which, together with geological mapping, trenching and earlier investigations during the 1980's, indicated a substantial resource of high quality limestone and dolomite. A follow up diamond drilling program is expected in January of 2006 to confirm and expand the resource. Conceptual engineering and quarry design was started during August and will continue through the remainder of the year.

The preliminary inferred resource totals more than 100,000,000 tonnes of carbonate material.

Topography

The carbonate rocks form a zone approximately 650 metres wide by 4,000 metres long located in a slightly depressed plateau-like area some 2,000 metres in width by 4,000 metres long which rises to approximately 850 metres elevation. There is a mixed organic overburden layer between 1 and 3 metres thick, consisting of humus and soils, overlying the carbonate rocks. All of the organic overburden will be removed and retained in order



to facilitate progressive reclamation back to productive forestry. The area is wooded with second growth timber following clear-cutting some 30 - 50 years ago.



*Dolomite Outcrop Approximately in the Centre of the Resource Area
(Looking North)*

5.5 Hydrology

The carbonate rocks are found along a north-south trend, generally have vertical or near vertical dips, extend to considerable depth and locally contain very minor Karst-like features. Granitic intrusive rocks are found on both the east and west margins. Numerous small watercourses and shallow lakes indicate a high natural ground water table close to surface. A network of water monitoring boreholes will be established during the next diamond drill program, expected to be in January 2006, to enable a hydrological interpretation of the ground water flows and conditions. This is important not only from an environmental perspective but also because washed rock processing requires significant volumes of water. Process water requirements will be provided from natural precipitation and the recycling of water from the sedimentation ponds. The water balance is not anticipated to be an issue in this area of very high rainfall. Appropriate water management systems and site controls will be designed to ensure minimal impact on the surrounding streams and lakes.



5.6 Project Schedule

Biophysical Investigations	August 2005 – July 2006
File Project Description with EAO	September 2005
Section 10 Order	November 2005
Development of Terms of Reference	December 2005 – March 2006
Section 11 Order	January 2006
Prepare Application for Environmental Certification	February 2006 – October 2006
Finalize Terms of Reference	April – May 2006
File Compliance Draft of Application	November 2006
File Application	January 2007
EAC Issued	June 2007
Permits Issued (provincial)	July 2007
Construction Start	August 2007
Production Start	January 2008
Project Duration	25 years

6. FIRST NATIONS AND PUBLIC CONSULTATIONS.

PPA first initiated informal discussions with the Sechelt Indian Band during the spring of 2005. The first formal meeting with SIB took place on July 5, 2005. Partly as a result of this, and in keeping with PPA's goal of maximizing local participation in its activities, discussions have progressed to the signing of an MOU by SIB and PPA on October 14, 2005, that forms the framework for future negotiations that will see the community benefit from PPA's potential commercial success and provide SIB with a meaningful say on how any resulting operation will be developed and managed.

PPA believes that face to face dialogue and "relationship-based consultation" are the most effective and appreciated communication format, and will therefore be the preferred method of seeking community involvement in the Project's evaluation and planning.

Numerous presentations regarding the Project have already been made to SIB and the communities of the Sunshine Coast. These will continue and become progressively more detailed as site plans and knowledge are developed through advancing field and engineering studies. PPA will provide detailed information so that SIB can properly



assess the economic and social impacts, while optimizing the benefits that will flow to them under an anticipated joint venture agreement.



*Site Tour for local Residents and Sechelt Council Representatives June 23, 2005
(Looking South)*

Lines of communications and an initial dialogue have already been opened with several local government and community groups. To date, starting in July, five community open house sessions, an SIB open house, a Community Public Forum and a presentation with the Halfmoon Bay Residents Association have been held along with a number of private presentations and site tours. This consultation process will continue and eventually lead to more public open house meetings and forums. The next major presentation is tentatively scheduled for late November or early December. Extensive efforts will be made to ensure that all interested groups are identified and offered a meaningful opportunity to get involved in the consultation process.

PPA has established an effective and convenient local presence in Sechelt through the opening of an office/visitors center and the recruitment of a suitably qualified area resident to provide active liaison. The visitors center is expected to be fully operational in mid-November. PPA's senior executives will continue to devote a considerable amount of their time to the consultation process.



7. ENVIRONMENTAL ASSESSMENT CONSIDERATIONS.

7.1 Land Use.

PPA believes that the Project site is ideally suited to the type of mineral extraction proposed and that this can take place with minimal and manageable effects on the environment. There are no permanent or seasonal dwellings affected by the Project, which is located in the most remote section of the Sechelt Peninsula, and in an area whose surface has already been completely logged on more than one occasion.

BC Hydro power lines run throughout the area and electric power is anticipated to be readily available. The Project area is bounded on the north by a main 500 KV transmission line.

Road access is currently available from the Halfmoon Bay Forest Service Road and then by a series of roads constructed by previous mining operators for mineral exploration and by forestry companies for timber harvest. It is expected that as part of the overall development some sections of the access road from the Halfmoon Bay Forest Service Road to the proposed process plant and extraction site will require straightening and upgrading. The extent and location of any upgrading will be determined as part of the detailed project engineering

The Project is located on Crown Land on mineral tenures previously known as the Plain (#258093), Zinc (#390423) and East Slope (#347746) mineral claims. In January 2005 the mineral tenure system was changed to a map staking system. The Plain mineral claim was converted to tenure #503225, the Zinc mineral claim was converted to tenure #503120 and the East Slope mineral claim was converted to tenure #503122. These claims are currently in good standing until December 3, 2006. Assessment reports will be filed at year end for exploration work performed during 2005. Work completed during 2005 will extend the valid date by several years.

The Project is located within the Sunshine Coast Regional District (SCRD) on lands currently zoned "RU2". Re-zoning to an "I" category will be required to be in compliance with SCRD Bylaw No. 310. There are a number of active aggregate and rock extraction operations within the SCRD that are currently zoned "I".

The proposed carbonate rock operation has numerous significant advantages in terms of environmental impact, such as:

- The processed materials will be transported by conveyor belt rather than large trucks – considerably reducing noise, dust and emissions.



- wet processing dust control measures, such as water sprays and misting systems, will ensure that dust is not a significant issue.
- Progressive reclamation of the land will take place, minimizing the area open at any one time.
- The process will produce only a very small proportion of non-commercial fine 'carbonate silt' material that will be used in reclamation. This material will be similar in characteristics to agricultural dolomite.

Initial investigations have lead PPA to conclude that there are three primary environmental issues: the foreshore barge load-out facility; surface water management and groundwater. The barge load-out facility may require a Navigable Waters Protection Act Part 5(1) Permit. PPA's concept for this facility minimizes its footprint and will not restrict water flow or the movement of fish and marine mammals. The company believes that the Project can be designed to have no impact upon the surface or groundwater.

The barge load-out facility will be visible from Sechelt Inlet but it is unlikely that visual impact will be a significant issue. No design has been completed for the barge load-out facility as final site selection has not been made. Dive surveys and initial biological baseline studies have been completed for the five possible sites. The Sechelt Indian Band has been requested to undertake archaeological evaluations of the proposed sites. When SIB input is complete a final site selection will be made. This selection will then be followed with detailed bathymetry and barge load-out facility design.

7.2 Socio-Economic

PPA believes that the socio-economic benefits of the Carbonate Project will be very positive for the Sunshine Coast, and especially for its First Nation partner, both of which are being adversely affected by the economic problems related to the recent decline of the forestry, mining and fishing industries. The principal benefits will come from the direct employment of some 80-100 people in stable, non-seasonal jobs, in addition to which there will be an indeterminate but significant number of indirect jobs created. The operation will contract out many essential services to local businesses such as forestry clearance, earth moving for overburden stripping and restoration, the operation of tugs, and marine maintenance to name but a few.

8. REGULATORY FRAMEWORK

8.1 British Columbia Environmental Process

Proposed mining developments that exceed the threshold criteria laid out in the Reviewable Projects Regulation are required to obtain an Environmental Assessment Certificate ("EAC") from the Environmental Assessment Office ("EAO") under BCEAA before issuance of a Permit under the Mines Act or any other provincial agency permit or



approval. The Sechelt Carbonate Project requires an EAC as the Project exceeds the threshold limit for production of 500,000 tonnes per year.

Under the *Concurrent Approval Regulation*, statutory permitting, licensing and approval processes, including the Mines Act Permit and Crown Foreshore Lease, may proceed concurrently with the EA review at the proponent's option. However, no statutory permit approvals may be issued before an EAC has been obtained.

The intent of the EA process is to identify any foreseeable adverse impacts through the Project's life-cycle, including construction, start up, operation and shutdown and to determine ways to eliminate, minimize, mitigate, offset or compensate for identified impacts. The process identifies the potential effects of the Project on environmental, social, economic, heritage and health values and provides information on the nature of public and First Nation support for the specific Project.

The EA process is initiated with the submittal of a Project Description to the EAO, who determine if the Project requires an EAC, and if so, if the process will be lead and managed by the EAO. The process then continues through a series of steps beginning with an order, termed a "Section 10 Order", issued by the EAO, confirming that an EAC is required for the Project. A "Section 11 Order" is then issued by the EAO that defines the scope of the EA and procedures to be followed before and during the review, following which the proponent and the EAO, together with First Nations and other stakeholders, develop the *Terms of Reference* for the environmental and socio-economic studies. Finally, the Application Report is submitted for review, based on the approved Terms of Reference. The decision to approve or reject a mining project is made by the Minister of Environment and the Minister of Energy, Mines and Petroleum Resources.

Public Participation

The Act establishes detailed notification and information requirements and provides clearly established opportunities for citizens to identify any issues and concerns about a specific project during a formal public review of the Certificate Application. Every application, comment, report and decision in the review process must be filed on the Project Registry and will also be made available on the EAO website. The Section 11 order establishes requirements for early and ongoing meaningful public consultation by the proponent and the EAO in order to identify issues and to resolve public concerns. The Act requires that project reviewers consider public comment when formulating recommendations for government decision-making.

First Nations Participation

The EA process includes requirements for First Nations consultation and provides for meaningful participation by First Nations whose traditional territories include, or are in the vicinity of, the project. A First Nations organization may join the project committee,



or it may choose to only review and comment on project documents. The Province has legal obligations for consultation and, where appropriate, accommodation of First Nation interests. The consultation and accommodation efforts of a project proponent, as required through the Section 11 order and through the proponent's own initiatives, are taken into consideration in determining the adequacy of consultation and accommodation.

8.2 Federal Environmental Assessment Process

The Canadian Environmental Assessment Act ("CEAA") is triggered by Federal Government agency involvement in a project. However, on March 11, 2004, the government of British Columbia signed an updated harmonization agreement with the Canadian Federal Government, such that if a project triggers both a Federal and Provincial environmental assessment, then one co-operative assessment will take place. In this case, as the Project is not on Federal lands, the BC EAO is the lead party, with Federal participation. For these situations, the Federal Government delegates its EA process responsibilities, but not its decision-making responsibilities, to the BC EAO, which then works closely with the Canadian Environmental Assessment Agency.

CEAA applies when a federal department or agency (a "Responsible Agency" or "RA") is required to make a decision on a proposed project. Under CEAA's "triggering" provisions, an assessment is required if a federal authority exercises or performs one or more of the following powers, duties or functions relating to a project:

- Proposing the project (known as the "*proponent trigger*");
- Granting money or any other form of financial assistance to the proponent (the "*funding trigger*");
- Granting an interest in land to enable a project to be carried out (e.g., sell, lease or otherwise transfer control of land) (the "*land trigger*"); or
- Exercising a regulatory duty in relation to a project, such as issuing a permit or license, which is included in the Law List prescribed in CEAA regulations (the "*Law List trigger*"). This includes such items as Section 5(1)(a) of the *Navigable Waters Protection Act* (NWPA) and Fisheries and Oceans Canada's involvement under Section 35 of the *Fisheries Act*.

A new *Canadian Environmental Assessment Act* was proclaimed on October 30, 2003. The Project falls under the provisions of this new legislation. Under CEAA, projects receive a level of EA review tailored to their impact potential. There are five EA review options under CEAA: 1) screening, 2) class screening, 3) comprehensive study, 4) mediation and 5) panel review. The *Canada-BC Agreement* applies to screenings and comprehensive studies, and provides for a joint panel review.



CEAA Implications

According to the EAO, approximately one-third of the projects certified to date in BC since passage of the Act have also triggered the *Canadian Environmental Assessment Act* (CEAA). Three possible triggers that may require the application of CEAA to this Project are outlined below:

- Explosives - Manufacturing of explosives on site requires a license under Section (7) of the *Explosives Act*, however, it is proposed that explosives be purchased from an explosives supplier off site and that a satellite facility on site be used for the storage of ammonium nitrate and emulsion and the use of one process vehicle on-site. A satellite facility requires that the supplier apply for a Satellite Certificate from the Federal Explosives Regulatory Division of Natural Resources Canada, which does not require an *Explosives Act* license and would not trigger the CEAA process.
- Navigable Waters - Under Section 5(1) of the *Navigable Waters Protection Act*, the proposed barge load-out could require a formal approval *if it is decided that this structure substantially interferes with navigation*. As this structure is located along the shore disturbance of navigation should not be a concern.
- Disturbance to fish habitat would require formal approval under Section 35(1) of the *Fisheries Act*, which prohibits that harmful alteration, disruption or destruction of fish habitat. The barge load-out facility will be constructed above tidal water and should not affect habitat.

Comprehensive Study

A comprehensive study is conducted if CEAA is triggered and the proposed project meets at least one of the specifications listed in the *Comprehensive Study List Regulation*, which lists the classes of projects likely to have significant environmental effects. The Project appears to fall under Paragraph 18(i), of the above regulation, which specifies the following class of project:

“18. The proposed construction, decommissioning or abandonment, or an expansion that would result in an increase in production capacity of more than 35 per cent, of

(i) a stone quarry or gravel or sand pit with a production capacity of 1,000,000 t/a or more”



CEAA Environmental Assessment Factors

Section 16 of CEAA requires that certain factors be considered and addressed during a comprehensive study. Factors that are of significance to the Project include:

- Environmental effects assessment;
- Cumulative effects assessment;
- Significance of environmental effects;
- Mitigation measures to be undertaken;
- Mitigation follow-up planning;
- Accidents and malfunctions contingency planning (emergency response);
- The purpose of the Project, alternative means of carrying out the Project and the environmental effects of any such alternative means;
- The need for and requirements of any follow-up program with respect to the Project; and
- The capacity of renewable resources that are affected by the Project.

8.3 Other Licenses, Permits and Approvals

A Permit is required under the *BC Mines Act* and a Crown lease of the foreshore is required under the *Land Act*, both of these will be applied for concurrently with the Environmental Assessment Certificate application under the *Environmental Assessment Act*. *Environmental Management Act* may require that a 'site profile' be submitted to the district inspector of mines, which must include information pertaining to previous uses for the site and any known residues, chemicals, tanks or containers stored or utilized at the site. Permits for emissions to the air, discharge of effluent, the storage and handling of industrial waste and solid refuse are also addressed under this act.

Additional permits may be necessary for this Project and will be identified during the review process: possible permits are listed in the Table below.



ACT	RELEVANT SECTION	PERMIT/LICENSE
Forest Act	Sec. 45	Free Use Permit
	Sec. 47	License to Cut to a person who does not otherwise have the right to harvest Crown timber
	Sec. 91	Road Permit
Provincial Forest Regulation, BC Regulation 562/78 (Forest Act)	Sec. 3	Special Use Permit
Highway Act	Sec. 57	Permit for access to a Controlled Access Highway
Highway (Industrial) Act	Sec. 5	Certificate granting leave for an industrial road to cross or join, or be crossed or joined, by a public road or highway
Mines Act	Sec. 10 or 11	Permit for work in or about a mine
Mining Right of Way Act	Sec. 3	Consent or permit to take and use private land, or to use Crown land, for a right of way
	Sec. 4 (1)(b)	Written approval described in that provision relating to the taking and using of private land, or the using of Crown land, for a right of way
Safe Drinking Water Regulation, B.C. Regulation 230/92 (Health Act)	Sec. 2	Permit for construction, alteration or extension of a water works system
Sewage Disposal Regulation, B.C. Regulation 411/85 (Health Act)	Sec. 3	Authorization for the construction, installation, alteration or repair of a sewage disposal system
	Sec. 4	Authorization to use, operate or cover a sewage disposal system
Utilities Commission Act	Sec. 24 or 25	Energy Removal Certificate
Environmental Management Act	Sec. 8	Permit to introduce waste into the environment, store special waste, or recycle special waste
	Sec. 9	Approval to introduce waste into the environment, store special waste, or treat or recycle special waste
Water Act	Sec. 8, 9	Approval for the short-term use of water, or approval for changes in and about a stream



8.4 Potential Effects Matrix

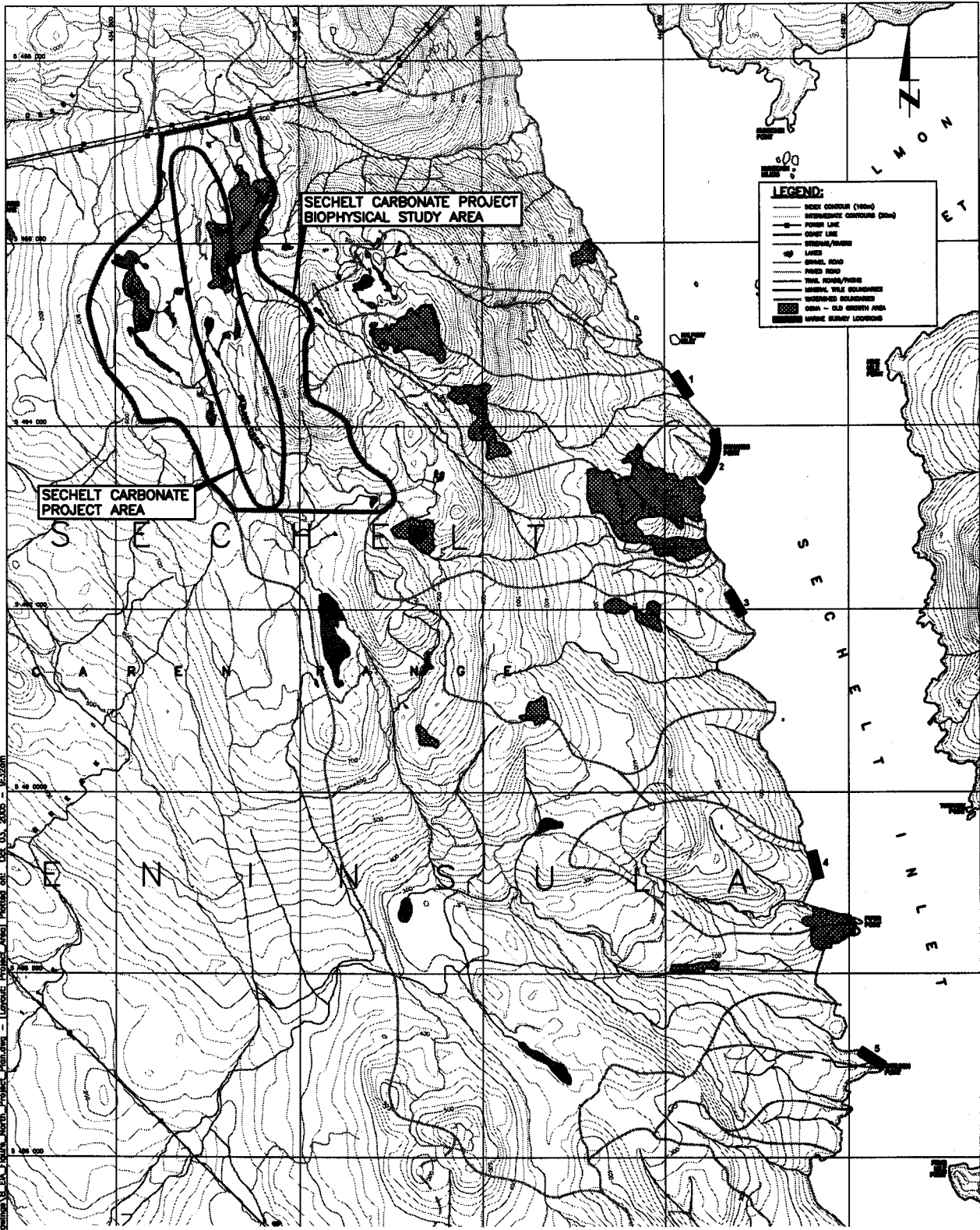
Based on PPA's current understanding of the Project area and initial conceptual engineering, areas where the Project may have impact and the degree of impact are tabulated in the table below. Each of these areas will be explored in detail through field investigation and public consultation and fully described in the EA document.

Category	Impact
Environmental Setting	
Vegetation	manageable
Wildlife	manageable
Air Quality	manageable
Surface Water	manageable
Groundwater	manageable
Terrestrial Ecosystem	manageable
Freshwater Ecosystem	manageable
Marine Ecosystem	manageable
Land Use	yes
Visual Resource	manageable
Socio-Economic Setting	
Employment	positive
Training	positive
Income	positive
Tourism	none
Foreshore Use	manageable
Aboriginal Traditional Use	manageable
Water Supply and Quality	none
Housing	none
Education	none
Community Infrastructure - Health Care, Recreation, Police, Fire Protection	none

9.0. SUMMARY

Pan Pacific Aggregates Ltd. believes that the proposed Carbonate Project will offer overwhelmingly positive benefits to the communities and stakeholders of the Sunshine Coast. The effects on the environment can and will be minimized, and appropriate rehabilitation and mitigation plans will be developed.



The permit process will be managed for PPA by Cal Mark, M.Sc., P.Geo. who may be contacted at the address and telephone numbers shown on the cover page.



SECHLT CARBONATE PROJECT AREAS:

BIOPHYSICAL STUDY AREA: 619.5 Hectare
 PROJECT AREA: 214 Hectare

SCALE 1:40,000 0 2km

DRAWN BY: _____ DESIGNED BY: _____ CHECKED BY: _____ APPROVED BY: _____			PROJECT: PAN PACIFIC AGGREGATES EIA TITLE: PROJECT AREA PLAN	DILLON PROJECT NUMBER: 05-4940 DILLON POLYMER NUMBER: _____ SCALE: AS SHOWN	CLIENT PROJECT NUMBER: _____ CLIENT POLYMER NUMBER: _____ DATE: _____ REVISION: _____
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