PUBLIC HEARING

WHITES POINT QUARRY AND MARINE TERMINAL PROJECT

JOINT REVIEW PANEL

VOLUME 1

HELD BEFORE:  Dr. Robert Fournier (Chair)
               Dr. Jill Grant (Member)
               Dr. Gunter Muecke (Member)

PLACE HEARD:   Digby, Nova Scotia

DATE HEARD:    Saturday, June 16, 2007

PRESENTERS:   Bilcon of Nova Scotia
              Mr. Paul Buxton

Recorded by:  A.S.A.P. Reporting Services Inc.
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Per: Hélène Boudreau-Laforge, CCR
--- Upon commencing on Saturday, June 16, 2007

at 9:00 a.m.

THE CHAIRPERSON: Good morning. I
would like to welcome you all to the hearing for the
Whites Point Quarry and Marine Terminal Project. This
is a Joint Panel’s review.

I’m going to start by introducing the
panel members and then the Secretariat. On my left is
Jill Grant. She is a professional planner by training.
On my right is Gunter Muecke, who is an earth scientist
by training, and I am Robert Fournier, oceanographer and
the Chairman of the Panel.

The Secretariat is over on my far right
and I’m going to ask each individual as I identify them
to just put their hand up. Debra Myles, she is the
first of two panel co-managers, and she is an employee
of CEAA, the Canadian Environmental Assessment Agency.
Helen MacPhail, she is the second co-manager. She is
with the Nova Scotia Department of Environment and
Labour. Debbie Hendriksen is our Communications
Advisor, and she is with CEAA, and Adrian MacDonald is
our analyst, and he is with CEAA as well.

Now a few words about our mandate. We,
the Joint Panel, were created in the fall of 2004 by the
Minister of the Environment for Canada and the Minister
That’s the reason why this is called a
Joint Panel, because it has two masters, one master in
Ottawa, one master in Halifax. The Panel’s
responsibilities are outlined in a memorandum by the two
Ministers which delineate the terms of reference and so
forth.

The specific terms of reference, that
is the rules by which this Panel is operating, are
outlined in an addendum to the memorandum and that is
available from the Secretariat if anybody wants to see
it.

Now what our task is, short-hand task I
guess, is that we are empowered to conduct an
independent and impartial review of the proposed basalt
quarry and marine terminal.

And the final product from this Joint
Panel will be a report and that report will offer advice
to the two Ministers. I would like to stress to you
that we are not a decision-making body. We are an
advisory body. We provide advice to the two Ministers
and the Ministers make the decision.

Now I think it would be useful if...
It will be a little tedious perhaps, but it might be
useful if I were to read to you verbatim, and it will
take two or three minutes, from the memorandum which I just mentioned, and that memorandum outlines what our responsibilities are, so if you just bear with me, I'm doing it for clarity sake, so everyone in the room will understand what it is we have to do.

AThe Minister of Environment and Labour for Nova Scotia, and the Minister of the Environment, Canada, have determined that the Panel shall include in its review of the Project, consideration of the following factors (and they go from (a) to (p)):

(a) purpose of the Project;
(b) need for the Project;
(c) alternative means of carrying out the Project that are technically and economically feasible and the environment effects of any such alternative means;
(d) alternatives to the project;
(e) the location of the proposed undertaking and the nature and sensitivity of the surrounding...
area;

(f) planned or existing land uses in the area of the undertaking;

(g) other undertakings in the area;

(h) the environmental effects of the Project, including the environmental effects of malfunctions or accidents that may occur in connection with the Project and any cumulative environmental effects that are likely to result from the Project in combination with other projects or activities that have been or will be carried out;

(i) the socio-economic effects of the Project;

(j) the temporal and spatial boundaries of the study area(s);

(k) comments from the public that are received during the review;

(l) steps taken by the Proponent to address environmental concerns expressed by the public;
(m) measures that are technically and economically feasible and that would mitigate any significant adverse environment effects of the project;  
(n) follow-up and monitoring programs including the need for such programs;  
(o) the capacity of renewable resources that are likely to be significantly affected by the Project to meet the needs of the present and those of the future; and  
(p) residual adverse effects and their significance.  

That is our mandate. Those are the things that we are considering within this Panel of Review. At this point, I should now identify to you that to my left is the Proponent. The Proponent of course is the commercial entity behind the Project, and the commercial entity is known as Bilcon of Nova Scotia. Bilcon of Nova Scotia is a wholly-owned subsidiary of another organization called Bilcon of Delaware. And Bilcon of Delaware, as I understand it,
is a holding company for the Clayton Group of companies, and Bilcon of Delaware has specific responsibilities for what are called quarrying interests.

The third entity, that is the commercial entity that owns Bilcon of Nova Scotia and Bilcon of Delaware is the Ralph Clayton and Sons Group, and they are referred to as Clayton Concrete Block and Sand, and they are from New Jersey, in the United States.

Now I would like to point out that I think it’s useful to very briefly give you a chronology of this Project since it’s our first session when we’re together.

It came into being in the fall of 2004, and by this Project I mean the Joint Panel Review process. The Panel was constituted in the fall of 2004.

In January of 2005, the Panel held four scoping meetings in this area, one in Digby, Digby Neck, Wolfville and Meteghan.

The reason for those scoping meetings was to reach out to the public using a very preliminary set of guidelines. The public was asked: Are these guidelines satisfactory, and if they’re not can you recommend suggestions to us, to the Panel, in which we

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could modify these guidelines and thereby provide them to the Proponent?

In fact, that happened and the sessions were well attended and a great deal of public input was received at that time.

In March of 2005, the guidelines, which are the instructions given to the Proponent as to how they should put together an Environmental Impact Statement, they were given to the Proponent in March of 2005.

In March of 2006, the EIS (Environmental Impact Statement) was received by the Panel. We received it then.

Between June of 2006 and January 2007, four sets of information requests were sent to the Proponent. Once we had received the EIS, we reviewed it and found that there were shortcomings. Those shortcomings were put together in what is called an information request which went to the Proponent and we said to the Proponent: ACorrect these\textsuperscript{2}, and then responses were received.

The complete response was offered to the Panel on February 2007, and then in February 2007 one more set of information request was then forwarded to the Proponent, so five in all.

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And here we are in June of 2007 in our hearing. The hearing is the final formal phase in this process if you will with one exception, and that is 90 days after we complete or close the record off, we will in fact be delivering a report and that report will go to our two political masters, which will be of course the Minister of Environment for Canada and the Minister of the Environment and Labour here.

Now our report will be constructed on the basis of all the information which exists in the public record. Now that is the body of information we will be using.

The public record is available, and I will give you some information about that in just a moment, but ever since this Panel came into being, every bit of correspondence, every document received, every piece of information that is relevant to this process has been available to the public.

The hearing, these hearings will be transcribed and they will enter into the public record as well.

At the end of the hearing, assuming everything is in order, we will terminate the public record and then begin to write our report.

I would like to emphasize that this is
a public process. It has been a public process from the beginning. We have done everything within our power to make it public and transparent. We have engaged the public in every step of the way and as I said, all the documents are available to everybody in this room, and those documents are available in a physical form in the Isaiah Wilson Library, which is here in Digby, or they are available electronically through the Website which you can get from the Secretariat.

Now one small caveat here is that although this is a public process, there are a few modest limitations to this process, which means that some of the people who will be presenting and some of the people who are in the audience are known to us, and we need to say this although it’s a little bit awkward in the sense that we will not be interacting with anybody in the room, with the Proponent or with the audience or whatever because we’re trying to maintain a distance from that.

So if we walk by you without nodding in your direction, then you probably will understand what is going on, okay? It’s very important that we keep our distance from all parties.

Okay. Let me turn my attention now to procedures, procedures as they relate to this particular

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process.

The purpose of these hearings, the reason why these hearings have been called is to provide a thorough examination of all the matters which are relevant to the mandate of this Panel, which is that list of items which I mentioned earlier.

These issues and the complete record of that information is important to us in terms of decision making. We are interested in the input of all parties, the Proponent, both levels of Government, Federal and Provincial, NGOs and individuals, and we’re hoping that we will have an opportunity for everybody to be heard.

It is the intention, my intention and my colleagues’ as well, to conduct the process in a fair and equitable manner. What we are looking for is cooperation by all parties and we’re looking for courtesy. We think that this should be a courteous process throughout.

We are very much aware that emotions run high on this topic, but nevertheless, if people are not courteous, then we will take steps to alter the situation in order to bring it back to a state of what we think will be a proper operation of the Panel.

Now one thing you should know is that

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all presentations will be directed to the Panel. One thing that may not be obvious is that all questions are directed to the Panel, even though the question might normally go to the Proponent or even to some other individual in the audience.

It comes through us and then we redirect it. Or in other words, these are our hearings and everything flows through us.

In many ways, it’s not any different from the House of Parliament where everything goes through the speaker, okay?

Also, even though I am giving you some rules here, the Chair does have some discretion to alter or waive the rules if in the Panel’s opinion the hearing objective can be better served in another way.

What that really means I think is that we are going to run with a set of rules, but we are looking to maximize the possibility in terms of information transfer and the courteous disposition of all parties in order to make this process work.

If for some reason things go a stray, then we may have to change the rules. We would not want to, but it may be necessary.

This morning, the presentation... I’m making the opening remarks and they will be followed by
a presentation by the Proponent over here.

Following that presentation, the Panel will question the Proponent and then questions will be entertained by the Federal Government, Provincial Government and by the public.

In general, that is the sequence of questioning that will occur, okay? So that if an individual... Let’s say an individual from one level of government comes to the meetings and makes the presentations, the Panel will ask the questions first. We will then offer the opportunity to the Proponent, and then we will open it up to the Federal and Provincial Government, others who are in the room and the public, okay? So there will be a sequence in which this will work.

In general, most of the presentations that will be heard over the next two weeks will be offered by individuals who have pre-registered.

If for any reason people come at the last minute and wish to participate... We made the rules very clear, we would like to entertain as many people as possible, but all the pre-registered individuals will be presenting and those individuals who have not pre-registered, who simply walk in off the street, we will try and entertain them but it may not be
possible.
This schedule is very tight. We have scheduled 15 hearing days, and they are packed solid, and I was told last night that there are 84 presentations to be heard. So it will be very, very compact over all.

We don’t wish to inhibit anybody, but I do have to say to you that we will exercise a certain regulatory process, okay? And by that what I mean is that if an individual stands up and tells us that they are scheduled to make a 15-minute presentation and there is nothing new in that presentation and it is clear to us that there is nothing new, then we may ask that individual to sit down.

If an individual stands up and is repetitious, that is says the same things in minutes one to two, and then repeats it again in minutes four to five, and then repeats it again in minutes seven and eight, we may ask that person to sit down.

If a presentation lacks clarity, that is if we can’t understand what is being said, we may ask the person to sit down.

If it’s uncivil, if it’s discourteous or offensive to any party in the room, we may ask them to sit down.
And finally, if individuals stand up and speak on a topic which is not relevant to our mandate, interesting though it may be, if it's clearly irrelevant to these hearings, we may ask them to sit down. So all this is a forewarning.

Now just a few additional items, and I will be done with these remarks. There are some documents available from the Secretariat. The memorandum of understanding which I mentioned, the terms of reference, and if there are other things that you don’t have, you can certainly come forward and if they don’t have it they can certainly direct you to where you could find it.

As I said, it’s a very, very transparent process, and we would like you to feel that you can get access to these things.

One thing you should be aware of is the schedule has been defined for the next 15 days, but like all things it changes rapidly.

I would suggest to you that you check with the Secretariat every day for a revised schedule. It may not be revised, but it may well be. And it will change as people drop out of the process or whatever, so even though we have a 15-day schedule, it’s a projected schedule and perhaps not the real schedule.
Another comment I should make is that any presentation made here can be done in English or French. All the presentations will be recorded. They are being electronically recorded at the moment. They will then be transcribed and then the transcripts will become available we think within 72 hours, so that everything said in this room will be recorded and documented and available.

All of those documents, all of those transcripts will end up in the public record and be available to anybody at anytime.

Now a couple of constraints. While the hearings are underway, while the process is underway, no recordings are allowed in this room, no audio recordings and no video recordings.

No cell phones ought to be operated.

If you have an urgent call, leave the room please because it should not be operated here.

If there are journalists in the room, we would ask those journalists not to conduct interviews during the process and to do no filming during the process, certainly not during the presentations.

If a journalist wants to do either of those things, they can be done at the break, they can be done at lunch time, they can be done at other times.
Also, we are going to try and take a break every morning and every afternoon. Now, we don’t have a set time for that, but we’re thinking about 10:15 to 10:30, that what we will try and do is take a break for 15 minutes. And in the afternoons, it will be around 2:30.

And the reason I say around is because we will probably finish fitting a presentation or a line of questioning of something. So at about those times, you can expect that.

One final thing you should know is that there is a phrase used in these kinds of hearings called an undertaking, which means that in the process, sometimes an issue is raised and an individual is asked for information and is unable to provide that information.

So they agree to an undertaking, which means that individual agrees to bring that information forward at some point down the road, presumably within the hearing.

In other words, it could be that by the time the hearings are approaching the end, there could be several undertakings where people have agreed to provide a table of information or a document of some sort, that sort of thing.
Just keep in mind that undertakings will be identified and they will be registered by the Secretariat and there will be an expectation that that will be fulfilled.

The reason I point this out is that if undertakings are granted and they are not fulfilled, than the record may not be closed off, and the process of the Committee may be continuing until that undertaking is received, all right?

It can be seen as a delay of the process but normally that does not happen. Normally what you do is you set a time and say: AOn Wednesday, we expect this undertaking, it comes in and then the record is clear and then we proceed on.

So it is just a quick note, because it’s a term that is not commonly used.

Okay. We now come to the end of my remarks. The final day of this process is expected to be Saturday the 30th of June, and on that day in the afternoon we expect to entertain closing remarks.

That means that all the presenters have an opportunity to summarize, if they wish... That is to return to the microphone and verbalize some summary remarks.

Now we have scheduled the afternoon of
Saturday, they are 84 presenters, if you do the mathematics that means that everybody gets about 90 seconds.

However, I have been told by my colleagues who have much more experience than me that the numbers reduce. So what we’re thinking is that we will take a poll, an assessment of the number of possible presenters towards the end of the second week to gauge what is available and then time will be allotted to fit the number of people who will be making those remarks, okay?

Finally, if all goes well, at the end of those hearings, as I said before, the record will be closed.

At that point, the clock is ticking and our report should come forward within 90 days and that means that the total evidentiary record will be available to you in the Isaiah Wilson Library online and it will represent all the information upon which the Committee, the Panel, will be making its final judgement, okay?

I think that is all I have to say on this topic. Now according to the schedule as I said, we will now move into a presentation by the Proponent and a suggestion to Bilcon is that we would like a break.
around 10:30, so if we could schedule the presentation
so that we can get a 15-minute slot at the end of one
presentation or before the start of another or whatever,
that would be very convenient, okay?

It does not have to be at 10:30, but
approximately 10:30.

So we turn it over to you.

PRESENTATION BY THE PROPOSER, BILCON OF NOVA SCOTIA

Mr. PAUL BUXTON: Good morning. My name
is Mr. Paul Buxton, and I am the Project Manager for
this project.

I am pleased to be here this morning to
talk about a project that we believe strongly in, that
we believe is good for the community, good for families,
good for now and good for many years in the future.

I would like to take this opportunity
to thank the Panel, the regulators, Federal and
Provincial, and the interveners for lending their
expertise, their judgement and their time to this
important process, and I would like to welcome everyone
to Digby.

Today is an opportunity for us at
Bilcon to tell you about our project, the Whites Point
Quarry and Marine Terminal Project, to tell you who we
are, why we are here, how we got here in the first place

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five years ago and why in spite of the many challenges
in the past five years, Whites Point is a project that
makes good sense for the region, for the economy, for
the environment and for the company.

We will also tell you what the Project
will look like over its 50-year lifespan.

First, who we are. Bilcon of Nova
Scotia as the Chair pointed out is owned by the Clayton
Group of companies, which has been operating
successfully for more than 50 years in New Jersey. It
is a father and sons business.

Bill Clayton Senior and his three sons
run the company, and they are as admired and respected
as they are successful.

Bill Clayton Senior started operations
in the 1950s on a small farm with a single truck. He
now heads an organization of more than 850 employees.
The Claytons have received more than
200 citations for excellence in design and
manufacturing. They have made thousands of
contributions to health, education and other community
causes.

Clayton Concrete Sand and Gravel was
named outstanding citizen of the year in New Jersey in
2004. The Claytons have a consistently strong record of

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employee relations with respect to benefits,
occupational health and safety. Now, they are good
people to work for, and I can certainly vouch for
that.

As Project Manager, I am part of
Bilcon’s underground team here in Digby County. I have
lived on the Anapolis Basin for almost 35 years. I grew
up in the town of Anapolis Royal on the restoration
projects which took place in 1980 in the historic
gardens and the King’s Theatre.

I worked on the Upper Clements Theme
Park and on Digby Neck. I and my company worked on such
projects as the Balancing Rock Trail and Brier Island
Lodge. So I have been very heavily involved in the
community since moving here.

I'm joined today by John Wall, the
Operations Manager. John, would you put your hand up?
Thank you.

John has been in the quarry business
for almost 30 years and has been a resident of the town
of Digby since last August.

Josephine Lowry is the 3rd member of the
Bilcon team here. Josephine is Document Director and
has put together the voluminous documents submitted to
the Panel during this process.
Why we are here now. The Claytons produce a million and a half cubic yards of concrete and 50 million concrete blocks a year. This requires a secure supply of crushed aggregates and sand.

While the company has been able in the past to secure these supplies on the open market, the company sees a vital need to generate these products in-house in the future.

How did we get to Digby County? An extensive examination of potential sites in the Northeast United States and in the Atlantic Provinces was carried out. I should note first that Digby Neck was part of an area targeted as a priority for the completion of a report prepared by the New Brunswick Department of Natural Resources, Minerals and Energy branch, on bedrock aggregate opportunities in Nova Scotia. Consequently, it also became a priority target for Bilcon in Nova Scotia.

Whites Point was determined to have a good supply of high-quality rock, deep water for the construction of a marine terminal and is in reasonably close proximity to New Jersey. And we will be of course dealing more about this in the presentation to follow.

What we are planning is to develop a basalt quarry, to crush and wash 2 million tons per year
for shipment to the Clayton operations in New Jersey. As we will note later on in the presentation, this project is not dependent upon a marketing process and the search for markets once the project is opened.

Essentially, the product has been sold and so the jobs and everything else, the capital costs, are secure.

So this morning, we would like to describe the project itself and I will try to break at a reasonable time Mr. Chairman so that we can have a break in the morning. Thank you.

I’m advised that I was not coming through clear and loud enough for everybody in the audience, so I will try to increase the volume.

We will start by just looking at an artist’s conception of the project, and there may be people who have not seen this before. It is remember an artist’s concept, and it shows the project as it would look in its very early years.

At the top, you will see the maintenance facilities coming in from the Whites Cove Road and just below that, you will see storage areas for organic materials and for sediments.

Left centre of the screen, you will see

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the process area where all the rock will be crushed, screened and washed. That process area will remain in that same location throughout the life of that project.

Towards the bottom left, you will see in this particular photograph sediment ponds. To the left, a large pile of rock which will be the rock taken off the process area. And of course, it can’t be processed until the plant is put in place. That area will ultimately become the largest of the sediment ponds.

And you can see the marine terminal in place and a ship tied up to the marine terminal being loaded.

What the outline will encompass is a brief discussion of the planning process. We will look at site layout, we will look at key components, site developments and operations, the reclamation process, environmental management and safety, Bilcon as a corporate citizen, and then we will get into a summary.

As the Chair noted, Bilcon of Nova Scotia is a subsidiary of Bilcon of Delaware, which is owned by the Clayton Group of New Jersey, which has had 50 years or more in operation.
Bilcon of Nova Scotia will construct and operate the Whites Point facility without government assistance or funding. We have not made any applications to any level of government for funding, and we do not intend to do so in the future.

Bilcon has made contributions to the community since we have been here, and that’s in health, youth, sports, education, libraries and in other community causes and we would certainly intend to do that in the future.

As I noted in the introduction, the Clayton Group has over 200 citations for excellence of design and manufacturing. They have made thousands of contributions to health, education, and other community causes.

They have an enviable record with respect to employee relations, benefits, occupational health and safety.

And just a couple of notes, the town of Lakewood, New Jersey, which is where until a year ago Clayton was headquartered, they received the Citizen of the year award in 2004. New Jersey General Assembly in 1998, award for outstanding service and commitment on behalf of others. Also the State of New Jersey in 2004, award for outstanding service and commitment to the...
community.

Bilcon and its local team could not have handled a project the size of this without significant assistance from a consulting team, and I just want to review for you because I noted just recently in the newspaper that it was said that Bilcon had in fact carried out the study without the assistance of consultants, and I would just like to review the consulting firms involved: AMEC Earth and Environmental; Atlantic Marine Geological Consulting; Canadian Seabed Research; Conestoga-Rovers and Associates; Elgin Consulting; Gardner Pinfold; Jacques Whitford, JASCO Research; LB&W Engineering; LGL Limited; Mallet Research; Mineral Valuation and Capital Inc.; Seabulk; XY Geoinformatics Services.

I would also like to review the extent of the project team. We saw the companies, now these are the experts who have helped us on very specific elements. Some are sort of small elements, quite sophisticated. We have economists, we have marine geologists, a significant list, and perhaps you could run the next list.

I think at this point we can demonstrate the extent of the scientific and engineering assistance that we have requested throughout this

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process.

Bilcon representatives I have already introduced to you. We have some consultants in attendance today to answer specific questions with respect to the project description, and I would also say at this point that all the consultants will be available on other days in order to discuss their specific sections.

Today, we have John Amirault, who is a professional engineer, and he will and can answer questions on engineering, accidents and also malfunctions.

Carlos Johansen is here to discuss elements of the marine terminal, its construction and operation.

David Kern, who has been with Bilcon since 2002 is assisting with the planning of the process, David Straigt to discuss surface water and Uwe Wittkugel who is an expert in the environmental assessment process.

Just a quick review of project time-lines now. This project goes back to 2002 for us, when in March a 4-hectare permit was applied for and received in April, and very shortly after that the decision was made, the company then being Global Quarry Products, to

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expand the area, to look at the possibility of a large quarry and marine terminal here.

Environmental assessments were commenced at that point back in May of 2002. At the end of that year, we filed application under the Navigable Waters Protection Act for the marine terminal. That was in December.

In 2003, a meeting was held in January with all the players, Federal and Provincial, and it was determined that we would commence a comprehensive study, and that was commenced at that time, and then in June of 2003, we were put into a Panel Review process.

In November 2004, we received draft guidelines. Following the draft guidelines as the Chairman pointed out, scoping sessions on the draft guidelines were held by the Panel and the final guidelines were submitted to us in March of 2005.

In 2006, the EIS (Environmental Impact Statement) was submitted and comments were received in August. Those were responded to in February.

The public hearings as we know are now commenced and the Panel has 90 days following the termination of the proceedings to make its recommendations to the ministers, and the ministers typically have 60 days to make their final decision.

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So that gives you something of a time-line, certainly towards the end of 2007.

This proposal concerns a 152-hectare site of which 120 hectares would be used for quarrying or other activities such as sediment ponds.

This is a processing plant, a marine terminal which will be designed and which we hope to operate for a 50-year period and which will produce 2 million tons of crushed, washed aggregate per year.

Again for those who have come in from other areas, this map gives you an idea of the setting. You can see the Whites Point Quarry about three quarters of the way along Digby Neck and on the Bay of Fundy.

We still have technical troubles here it seems.

This is the site essentially from the south and from a significant height obviously. In the centre of your screen, you can see a small sedimentation pond, and to the right of that a cleared area.

This is cleared by the company to look at the rock itself, to get a closer look, to see what the thickness of overburden would be and to generally get a closer look at the site itself.

Towards the top of the screen, to your
left-hand side, you will see an indent of lighter green material, and this is the coastal bog, and you will hear some more about that as we go through the process.

There’s a fairly small area and it is essentially the only area of wetland on the site prior to the construction of that settling pond.

You can see the coast is fairly uniform and the land to your top right would be getting towards the top of the mountain, which slopes down quite steeply down to the Bay of Fundy shore.

What I’d like to talk about here is the property itself, which is the large triangular piece of property, in a salmon colour I think we would call it, and that is the 152-hectare site. We have 80 acres of site.

That is the site which we talk about as the AProject site, and that has not changed. It has not expanded. And it will not expand, that is the Project site.

Other areas, for example in [inaudible], are lands which Bilcon has acquired in the last five years.

The green area to the bottom is an area of land where Bilcon has a setback agreement with the owner of the property.
The yellow areas are other areas and houses which have been acquired by Bilcon in the past several years.

Bilcon has not looked for or acquired any other property in Digby County or on North Mountain at any time in the last five years, and I think that this is important and I’m sure that there will be discussions of the potential for other quarries in the area on North Mountain.

There was even a talk of a quarry on Brier Island, which seems to me to be inconceivable, but I want to make it very clear to the Panel that Bilcon is not interested in any other site in Digby County or on the North Mountain.

So we got into the planning process, and pre-feasibility studies come first, then a conceptual design and then environmental assessment.

I want to make the point here that conceptual design and environmental assessment go hand in hand. Clearly, we have to start with a conceptual design and then we look at the potential environmental effects from that conceptual design.

Very likely, we then go back to the design because of some of the effects. So a conceptual design and the environmental assessment is basically a
process which takes place side by side throughout the entire planning stage.

Once they’re satisfied with the conceptual design and that we have made all the adjustments that we can make, then we can get into the implementation stage. This is after hearings, after permits have been issued.

We get into detailed design and there are other permits other than the environmental permits which need to be applied for.

We then get into contract drawings, specifications and then into an implementation phase.

Just to give you an idea of schedule, project planning commenced in 2002. I won’t say terminated in 2006, but certainly the planning up to this stage we are relatively satisfied with.

Environmental assessment commenced in 2002 and it is 2007 and more work was done in 2007. The detailed design we would hope would get underway this winter into 2008, 2009. Construction in 2008, 2009.

Operation and maintenance for a 50-year period.

The reclamation is shown also over that long period of time, and that is because a major decision was made in the planning process that the

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reclamation on this project would be incremental, and
we’ll deal with that a little later on in this
presentation.

And then at the end of the 50-year
period, we get into decommissioning and abandonment of
the site.

I would just like to put this quarry
into some sort of context. There are 45 to 50 quarries
in Nova Scotia over four hectares, and four hectares is
a threshold.

Basalt quarries already exist on Digby
Neck. They are relatively small quarries serving the
local market.

The mining industry is a significant
contributor to the Nova Scotia economy. $400 million
added to the gross domestic product. It employs over
5,000 people. The mining industry is the highest-paid
industry in the province of Nova Scotia.

I just want to spend just a couple of
minutes looking at Nova Scotia mineral policy.

The mineral industry is an
important participant in the
province’s economic strategy,
especially with its contribution
to value added production and
export revenue.\textsuperscript{\textcopyright} 

This was the mineral policy for the
province of Nova Scotia (2005). And I would note that
this is a value added product. It is a finished product
which is being shipped, and of course it adds to export
revenue.

\textsuperscript{\textcopyright} The Government of Nova Scotia
recognizes mineral exploration and
mining as a key sector
contributing to jobs, wealth and a
high quality of life for Nova
Scotians. \textsuperscript{\textcopyright}

And that is also from the same policy
of 2005.

\textsuperscript{\textcopyright} The Government will encourage,
support for and recognition of the
mineral industry by including
exploration and mining activities
as part of its overall industrial
strategy. \textsuperscript{\textcopyright}

And that is again from the 2005
policy.

So looking at the project itself, the
construction costs are estimated to be $40 million. It
would not surprise me that that has not gone up in the

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last year. The Canadian dollar has gone up. Many of
the raw materials have gone up in price, but certainly
$40 million or in excess of that.

The operating costs will be $20 million
a year, on an annual basis. And there will be a cost
upfront, and we will talk about this later, and that is
a reclamation cost guarantee.

There is a concern and it has been a
central concern in the past that mining companies come in, rip
holes in the ground and move away, declare bankruptcy
and we are left with the results.

This does not happen today. Cost
guarantees have to be put up in the form of cash or
bonds before the work can even start.

The workforce: 65 to 80 jobs over an
18-month construction period, 34 full-time employees in
the operations of the project, and we will have an
excellent wage scale. The employment will be long term
and this will be family sustaining employment.

We will provide on-site training and
even off-site training at Bilcon’s expense. We expect
to train the people very thoroughly for this project.
There will be a benefit package, dental plans, a pension
plan. And we will in our hiring process give high
preference to local people.
Why is this operation different? First of all, it's a quarry which starts from scratch as a major operation. Most quarries start as a small operation and they get bigger over time, and the expansion is somewhat willy-nilly, pieces of equipment are added and they tend to be inefficient and always trying to catch up.

This plant will be started from scratch. It will have a state of the art plant design. The plant and the equipment will be new. Safety will be designed into the plant. Very significantly, and we will deal with this at some length, all the equipment such as the crushers, the screens, the wash plant will be enclosed. We will have minimal direct Arock-metal contact, which is the source of noise on quarry sites.

We will have catwalks on all conveyors for safety reasons, good lighting, things like a conveyor spillage being cleaned by a small skid steer.

Typically, that is done by hand. Manual operation leads to back injuries and problems.
The entire plant will be computer controlled with complete information systems.

Another interesting feature is that the
plant components are able to run independently, which means that we can reduce electrical demand and we can increase the plant availability.

The loading of the finished product is by belt, it’s not by front-end loaders into harbours.

What is the need for the Whites Point Project from our perspective? Our parent company requires a source of raw aggregate which is not subject to market fluctuations or disruptions. This quarry can satisfy that need for a 50-year period.

What are the alternatives to the project? Well, unfortunately the crushing of rock does not lead to many alternative scenarios. One can recycle used concrete and other material, and in fact the Claytions do that at the present time. They recycle all the concrete material they can get their hands on, but it is simply not a feasible option to fully supply their requirements.

Alternative means evaluated. Well, we looked at different aggregates sites, extraction methods, rock fragmentation, rock processing, different methods of handling waste material management and utilization, different methods of handling wastewater and different methods of handling process water on the site, transportation modes and routes, ship loading
methods, terminal construction, timing and scheduling,
timing for the reclamation, alternatives to reclamation
and decommissioning.

So all these were considered in the
initial planning process.

When we consider alternatives, we have
to evaluate the alternatives and we carry out three
levels: Is it technically feasible? The suitability,
reliability and safety. Is it economically feasible?

Looking at the development and operating cost, the
commercial viability and the commercial risk.

If those two things are in fact in
place, then we look at the environmental feasibility.
But all three are required to meet the test to have a
reasonable alternative in place.

Alternative sites. There needs to be
suitability of good geological resources, high-quality
rock, a good quantity of rock, availability and size of
the land base (very important), proximity to residential
development, adequacy of transportation systems, the
technical feasibility involved in the particular site,
the economic feasibility of considering a particular
site, and of course last but very much not least, the
environmental considerations (socio-cultural and
natural).
What are the advantages of the Whites Point site? It has high-quality basalt rock. It has minimal overburden. It has limited site visibility. It cannot be seen from Highway 217, the scenic drive down Digby Neck to the Islands. There is no salmonid fresh water fish habitat on the site. It has minimal wetland habitat. There is feasible water depths for marine transportation. Access to the marine terminal can be gained without passage through the North Atlantic Right Whale Conservation Area. And the site is economically feasible.

I think later on in these sessions, you will hear from the Nova Scotia Department of Natural Resources with respect to the locations of high-quality basalt rock and the feasible water depth for marine transportation.

So what are the key components of this Project? There will be a processing plant area. It will involve crushing, screening, washing and stockpiling the product.

It is a finished product. The crushing, screening and washing is in fact a process to produce a finished product. And again, the crushing and the screening areas on this process site will all be enclosed.
There will be a ship loader. There will be a marine terminal. There will be infrastructure such as maintenance buildings, administrative offices, sediment ponds, topsoil and sediment storage areas, access road, mobile equipment and the environmental preservation zone or zones on the site itself.

The processing plant will consist of a jaw crusher and a vibrating grizzly feeder. There will be three cone crushers, five vibrating sizing screens, high rate thickener, reverse slope dewatering screens, 35 conveyor belts and this will give a capacity of 500 tons per hour net production of minus 1 inch stone in five different sizes.

This is obviously conceptualized, but here we have the Bay of Fundy, there is the crusher operation. The rock is brought by truck and dumped into this crusher operation, which you will see is enclosed, into the screening areas, the washing areas, back by conveyor to the various sizes and by loading tunnel onto the loader, the ship loader and on to the vessel.

And I would also make the note here, because we can see it here, that the processing plant is at a height of about 30 metres.

A little closer up again, the crusher plant enclosed. The screening operations enclosed. The

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washing operations enclosed. The conveyor belts will be
enclosed. Here, we have again the loading tunnels.
Here is the loading tunnel.

   So essentially, no mobile equipment is
required to load this ship. Essentially, the conveyor
stops in the loading tunnel, and the ship is basically
automatically loaded.

   For those of you who have not seen a
cone crusher, that’s what they look like, and these are
just to give you some sort of... We did have a request
through the process that some people did not know what
these elements look like, and so we tried to produce
some photographs.

   This is a high rate thickener. In this
particularly piece of apparatus, the wash water containing
the fines is processed to the extent that fines are
extracted, and the fines are them pumped as a sledge to
the top of the site in a barn storage area, and the
clean water left goes back into the wash process. So
this is a closed cycle system.

   Here we have the ship loader. It will
have a capacity of 5,000 tons an hour. The loaded 2,200
feet of 16 foot diameter reclaim tunnel. This will be a
radial arm ship loader and it will use belts only. This
is a ship loader that has just been completed on
Vancouver Island for another quarry project. This is that same ship loader complete. This one goes further out into the water than ours will. We go out about 200 metres into the Bay of Fundy. This one is significantly longer than that because of water depths.

And the ship itself, up to about 750 feet long and 100 feet wide, with the hatches as you can see. This is not a loading operation that will be at Whites Point, but I want you to get an image of the ship itself.

This is a ship loader that has been in operation for a significant period of time. It’s the Sechelt on the sunshine coast of British Columbia, fairly close to Vancouver, and you can see the cottages along the coast here, and these are very high-priced cottages which have been living in compatibility of a significant period of time.

The marine terminal will be supported on pipe piles. The mooring dolphins themselves, about 6 metres wide, 15 metres long, 20 feet by 50 feet approximately. The pipe piles will go into bedrock. There’s very little sediment in that area. And the terminal itself will extend 200 metres into the Bay of Fundy.
We have a minimum berthing draft at a little better than 16 metres, and there will be no ship pooling at the terminal.

A plan view. It’s a very simplified plan view, but you can see the radio on loader here. This is the loader, and it is able to rotate here so that the various holds can be filled without the ship being moved. This is a very efficient operation. It enables much speedier loading of the ship.

And here is a cross-section. And very specifically, this design of pipe piles was selected because it does not interfere with current flows along the coast, it damages a minimal amount of bedrock bottom and certainly it does damage the bottom, precisely where that pile goes in, and that area must be compensated under the Fisheries Act, and that will of course be dealt with in much greater detail later on.

You can see the loader itself is able to extend as it rotates on this quadrant device here. And again, about 16 metres of water.

Just looking at the layout where you saw the concept plan, this is a plan layout and the Whites Cove Road coming in from Highway 217, going through down to Whites Cove, and the dark green around the site and down the Whites Cove Road is an

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environmental preservation zone, which will be
maintained throughout the Project.

The processing plant is in this area,
administrative buildings and maintenance building here.
Sediment disposal area is here. Organic disposal area
here, and in the early years, first two or three years
of the site, four settling ponds.

This would be rock storage for the
material that comes off the processing plant area when
it is being built. It will be temporarily stored here
and possibly up in this area, and this will be the first
material that goes through the processing plant and gets
crushed, and then this will become the largest of the
sediment ponds.

The road plan. Again, the Whites
Cove Road coming in and going down. Roads to the
disposal storage areas. Roads down through here to the
crusher.

A road right along here, down to the
bottom of the site. And you know, these will vary
somewhat throughout the life of the Project.

Mobile equipment. We will have
loaders, we will have haul trucks, an excavator, a
bulldozer, skid steers, utility forklift, a crane and
very importantly a 5,000 gallon water truck.

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Again for those people that perhaps are not familiar, this is a loader, typical haul truck on a quarry site, typical excavator, bulldozer, the little skid steer that I talked about, which is a very important utility vehicle which is for personal safety, and a water truck with a spray bar at the back, which will be continuously employed during dry weather.

Still under key components, we have noise. And I would like to make the point here that Bilcon, throughout this process, held or attended committee meetings. People came into the office and expressed their concerns and we looked at these concerns very carefully through the process and in fact changed conceptual design in order to address these concerns.

Noise was clearly a concern. This is a rural area. So what we have done is make very significant improvements to typical quarry layout to deal with the issue of noise.

Whatever possible noise reducing materials will be used such as rubber and urethane screens. When the rock is being screened, it will be rubber. There will be rubber body liners to the rock trucks. There will be rubber liners in the impact zones of the hoppers, where the rock is dropped in, almost a
complete elimination in fact of aggregate on steel.
Most important is that the crushers, the screens and the
conveyors will be enclosed.

One other feature which I think is
important is that we will be using no night-time back up
alarms, which tend to have a high-impulse noise.

These are rubber lined trucks. You
don’t get the boom when the rock is dropped into these
trucks. These are shoots lined with thick rubber, and
at the bottom left-hand side, you can see the thickness
of the rubber here. It’s three or four inches thick
rubber.

This is sort of interesting and high-
tech and one of the things that one can do with a new
state of the art processing camera on the back of the
truck.

And here is somebody standing behind
the truck. The driver can actually see on his screen
what is happening. The fellow is behind the truck and
he can be seen on camera. It’s a very good safety
feature.

The second very significant concern
raised by the public is dust. How will we control dust
on this site?

Well first of all, we will add water to

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the basted shot rock to bring the moisture content to
1.5 per cent. So when it is being moved and put on the
trucks, it will already be moist.

The haul roads will be continuously
dampened by a dedicated water truck. We will apply high
pressure water at transfer points in the screening
process. The conveyors will be covered. The final
sizing of this product will be done by a wash screen,
wet.

Most important of all, the crushers,
the screens will be enclosed in buildings.

There’s a high population urban area,
very strict noise and dust controls. The noise and dust
control technology used here certainly met all the
conditions. All the process is enclosed.

Debris. No debris will be removed from
the site. The top soil and the sediment will be
stockpiled in bermed areas and they will be used in the
reclamation process. There will be no ocean dumping of
any kind.

The debris cycle, and this is in the
first five years, and of course it would change as the
features of the quarry change, but essentially when the
early area is stripped, these early areas here, that
material will go in the organic disposal area.

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This is the washer area, the high rate thickener. That material will be pumped up to the sediment storage area. When the reclamation process starts, which will in fact be in the first five years, that material will be mixed together and taken down, and the reclamation process will start back here.

And of course, the finished product will be shipped. Nothing will be wasted on this job site.

Surface water management. All the surface water run off will be stored in the sediment retention ponds, and they're designed for a 100-year storm event.

All the water on the site will be used in the process so the surface water, the rain water that comes down onto the site, is what we will use in the process and it will be recycled.

If we were to get, which could happen, two 100-year storms back to back, there may be discharge to the Bay of Fundy, but it would go through a newly constructed wetland on the site and into the Bay of Fundy in a controlled outlet structure.

This is a little bit later on in the process, and again I just want to talk about the water here, but here are the ponds now established. The

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original four, the very large fifth pond and in year 17, another pond up in here.

   Essentially, all the water from process area, from the roads, will come into here. Most of the sediment will be gathered here, and that sediment will be cleaned out on a regular basis and be taken up to the sediment disposal area.

   The water will get cleaner and cleaner and cleaner as it comes down into here and this will be from this pond, the make-up water for the wash cycle.

   Here, we have the constructed wetland so that if any water gets out of pond number one, it will have to go through this constructed wetland and then through a controlled outlet structure into the Bay of Fundy.

   So the make-up water for aggregate washing, it will be reclaimed from the sediment ponds. All the wash water systems are arranged in closed circuit.

   The fines are captured by the high rate thickener, taken to the top of the hill. The fines from the washing operation, again to be pumped to the dyked sediment area.

   Fuel handling. No ship refuelling at

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the marine terminal. That’s a given. There will be
no ship refuelling at any time in the life of the
Project.

All bulk fuel storage will be triple
contained. Fuel and oils will be distributed through
Wiggins type quick couplers, which will eliminate
possible fuel spills.

Again, this is important and is the
sort of thing that we can do because this is a new
quarry. These are snap type fittings. One is not
waiving a hose of diesel in the air. These are leak-
proof, and this can be used for not just fuel but for
oil, for coolants, for hydraulic fluids, et cetera.

The possibility of leakage is virtually
eliminated by using this sort of high-tech nozzle.

Just very quickly... And this Mr.
Chair could be an appropriate place to break, if that is
all right with you? Before we get into those.

THE CHAIRPERSON: So we will take a 15-
minute break and resume following it.
--- Recess at 10:25 a.m.
--- Upon resuming at 10:45 a.m.

THE CHAIRPERSON: Please continue.
Mr. PAUL BUXTON: We left off looking at
the three components of the project, and I’d like to run
you just quickly through the various phases.

The phases for five-year periods are
actually in the Environmental Impact Statement, so this
is the first phase and the second phase and the medium
phase, and then the end phases.

The beginning of the phases, the first
dfive years, the rock will be taken from this area, this
is the broken rock taken from the process area, and it
will be crushed first.

This little area here will be the next
area of quarry opened up, and this pond then will come
into being.

A sediment disposal area here, organic
disposal area here. So five operating sediment ponds,
 quarry area here, and the processing plant here, and it
will remain there through the life of the quarry.

Six to ten, not much change. You can
see the sediment pond here now in place. The quarrying
has now moved down into this area. The processing plant
again in the same place, the organic disposal area and
the sediment disposal area in the same place, and
clearly the marine terminal still in the same place.

And here, we go to years 16 to 20. It
is not quite halfway through the life of the quarry. A
sixth sediment pond will be opened here because this
area of the quarry will be opened up.

And again, the sediment disposal area, organic disposal area, they’re still in the same place and this material will have already been mixed to reclaim this area and this area and all the way around the pond. So this area will already be reclaimed at that time.

Going through now into the later stages, the sediment pond, a sediment disposal area I’m sorry, will have been moved down into this area and the organic disposal area moved down into here. This area will now be reclaimed and this area is now being quarried.

This area is also reclaimed. So probably 60 per cent, 70 per cent of the site has already been reclaimed at this stage of the process. The six sediment ponds are still there in operation. And here, we go at the end of the process. Now the rock has been quarried out, these areas and this area are being made ready for reclamation. All the other areas on the site will have already been reclaimed. So site developments and operations. How do we go about opening up this quarry and getting

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into the business of crushing rock?

Quarry development and operation requires blasting, crushing, washing, stockpiling and loading, and then the marine transportation. So those are the key activities.

Site development: The vegetation is removed on the small area of the quarry which is being opened up. These will be removed, they will be chipped and they will be composted. They will not be burned, and that material again will be used in the reclamation process.

The top soil and overburden which we have noted is really very thin on the site. It will be removed and it will be stored.

The roads, the ponds, the disposal areas and the processing plant will be erected, constructed, put into place.

The blasting. The blasting will take place approximately once a week during construction, approximately every two weeks during production.

Every blast will be carried out by certified blasters, licensed in the province of Nova Scotia. Pre-blast surveys will be conducted as required by the Nova Scotia Department of Environment and Labour.
Bilcon will have on-site full time a professional engineer with very significant blasting experience to supervise all the drilling and blasting to ensure the project is meeting or exceeding the regulations and guidelines. There will be no explosive storage on the site at any time during the 50-year life.

The quarrying and ship loading, we anticipate that will continue for 44 weeks of the year. This is to take into account the typical bad weather that we get in January and February.

This past year, we did not get any poor weather until perhaps January the 15th, but the time will come when it becomes difficult to wash the aggregate in extreme cold weather, because the waterlines will freeze up.

The radial arm ship loader will be used to load the ship. We anticipate that it will take less than 12 hours to load a ship, and we anticipate over the life of the project that we will be shipping basically on a weekly basis and that in the winter of course will depend upon whether the quarry is in fact crushing rock and whether weather conditions allow us to bring the vessel in.

The terminal is designed to accommodate
a Panamax size ship 250 metres long, a beam of 30 metres and draft maximum of 15 metres. A typical vessel load would be about 45,000 tons.

The vessel will approach the terminal by the designated shipping lanes. When it leaves the shipping lanes, it will reach the marine terminal on a prescribed route, and it will go in and out on precisely the same line each time.

The ship, as it approaches and departs the shipping lanes, will maintain a speed of less than 12 knots. This is very significant when it comes to the safety of the marine mammals that are in the area.

The product will go to the Northeast Coast of the United States.

The ballast water management. This has changed somewhat over the past year or so. Prior to June 2006, there were guidelines for dealing with the management of ballast water.

In June of last year, regulations came into place and all shippers are now required to comply with Transport Canada’s regulations with respect to the management of ballast water.

Here, we have the new shipping lanes and a designated route on the shipping lane into the terminal, back out the same route and into the outbound
lane of the terminal.

This approach and departure route does not go into the North Atlantic White Whale Conservation Area, and you will note that all our traffic going up the Bay of Fundy into Saint John and to other terminals in fact go through that Conservation Area.

The reclamation process. Why do we do it? Why do we reclaim? Well at the end of the day, we are required to reclaim but during the quarry operation itself, it provides advantages to reclaim as we go. It provides immediate erosion control, stabilizes the watershed.

We can start to re-establish maybe vegetation and wildlife on the site, and we can maintain at the end of the day and re-establish as we go aesthetics.

So the reclamation process will proceed incrementally over the life of the project. In fact, it will commence almost immediately.

When we construct, the sediment retention ponds, soil will be disturbed, and those areas will be immediately reclaimed.

The process includes site grading and drainage, soil preparation and planting (native species), and it will involve monitoring and control of

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invasive species.

One thing that we don’t want to do in
the reclamation process is introduce invasive species to
the site.

So the reclamation generally will take
place landward from the coast around the settling ponds
adjacent to the Bay of Fundy, and then landward towards
the east.

At the end of the day, we will have a
slurping site and a series of vertical or near vertical
hitches at the back. These will be fenced. The
reclamation zones will still be in place. I’m sorry,
the preservation zones will still be in place.

The planting that will have been put in
front of the pond areas will now be quite mature, and we
think that this will become a valuable site for use in
the future for other uses.

Can reclamation be done? Well, it is
done. It is done in Nova Scotia right now. It has been
done successfully. This is basically a surface coal
mine in Westville on the left-hand side in 1996, and in
1998 basically reclaimed, not mature yet but you can get
an idea of what can be done with sites such as this.

Here is a site in Michigan which was a
clay pit, kiln dust piles, stone quarries, et cetera,
and it is now thousands of acres of woodlands and
wetlands.

It can be done. There are very good
to anyone that are horticulturists, you will note that the
Butchart Gardens, which is one of the highest
attractions in Victoria, is in fact in an old stone
Quarry.

Environmental management, health and
safety, those are very important issues for the company
and for the workforce and for the residents in this
area.

What designs features have we
incorporated to minimize effects? Under the site
development, we have incremental site clearing,
incremental reclamation, the establishment and
maintenance of environmental preservation zones.

Transport. We do not intend to truck
aggregate on Highway 217 at any time. There will be no
local sales of aggregate.

We have said that if there is an
emergency in the area and we were to receive a call from
the Department of Transport or small craft harbours or
some government agency, we would respond to an
emergency, but we will not sell product from the site.
There will be no trucked aggregate on the highways in the area.

In terms of transport, there will be approximately one weekly shipment throughout the life of the Project.

The marine terminal is constructed on piles. No Airfill\textsuperscript{-}, no dredging. Very important. So low environmental impact on the fisheries habitat in that area. There will be some impact, but it will be very small and the damage that is done must be compensated for.

Dust, certainly a health feature. Most importantly, the crushers, the screens and the conveyors will be enclosed. The final sizing will be washed by wash screen. We will have a dedicated water truck to keep the dust down on the roads at all times.

Noise. Again, most significant is the use of enclosures, rubber lining for trucks, rubber lining for shoots, rubber screens so there is minimal Aggregate on steel\textsuperscript{-} contact. And again, no night-time backup alarms. All significant health and safety features.

Water management. The water on the site will be recycled. It will be recycled through the wash process. We do not intend to pump ground water.
We keep the water on-site for the high rate thickener
tank and through the series of sediment ponds.

The storm water will be managed. It is
significant to us. We need that storm water in the wash
process.

Also, we will have a controlled
discharge point when it is necessary, and it will be
very infrequent into the Bay of Fundy.

The planning process: The roles and
responsibilities to the people on-site will require the
development of environmental protection plans,
monitoring plans, environmental inspections, quality
assurance, quality control, environmental audits,
contingency and emergency response planning, training
and education of our own people and communication and
reporting.

What are the objectives of monitoring?
Well, to ensure proper operation of all the various
processes going on at the site.

It assists us in verifying the effects
predictions that we have made. It will confirm the
effectiveness of mitigation measures, or in fact it will
determine the need for new or revised mitigation
measures.

Other examples are on-site vegetation

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and flora, on-site bird communities, underwater noise levels. Now this monitoring will continue.

    Compliance monitoring. The Nova Scotia Department of Environment and Labour has standards and they have guidelines. This is compliance monitoring.

    So the noise levels at the property boundary, the ground vibration (the nearest structure off-site), dust levels, they’re all basically governed by the threshold levels set out by the Nova Scotia Department of Environment and Labour.

    Water discharge, again, is controlled and standards are set out by the Nova Scotia Department of Environment and Labour.

    On-site water well quality and yield. Well clearly, we want to make sure that the water that we are using on-site in our offices and maintenance facilities meets the standards for Canadian drinking water.

    So we get into project planning and detail design.

    We developed storm water management plans, erosion and sediment control plans, a detailed reclamation plan, a forest management plan, operation plans for quarrying, processing, loading and terminal operations. Also health and safety plans for every
segment of the operation on the site. There are also environmental management plans and very significantly training plans for everybody that is on the site.

Some of these plans are developed later, some of these plans have in fact already been completed.

The forest management plan has already been prepared by a local forest technician. This is just a part of that forest management plan, and I want to indicate here that we don’t consider our responsibilities to terminate at the boundary of the quarry, but we have in fact developed forest management plans for the properties that we have acquired because we would like to bring these back into fully productive forest areas at a later date.

So how do we implement these mechanisms? On-site, there will be an environmental management team which will be headed by the Operations Manager. He will be responsible for monitoring. He will be responsible for arranging for environmental audits, quality assurance plans, keep complaints records and an action plan.

How were those dealt with? Were they dealt with satisfactorily, in a reasonable period of

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time? Compensation policy also.

A Community Liaison Committee will be established and communication will be maintained with that committee because we consider it very valuable to get the feedback from the community.

And we will adopt throughout the management of this project an adaptive management approach.

What do we commit to as a company? We commit to a local focus. We commit to procuring local goods and services wherever and whenever possible. We will hire local workers.

There are 65 to 80 jobs during construction over an 18-month period, 34 direct jobs for the next 50 years. We will invest in our people. We will pay family sustaining wages. We will provide a benefits package. We will train people and re-train them.

It is in the interest of the company to acquire good people who are attached to the local area, to train them well and to have them stay with us until they retire.

We do not want to hire people every two years and have to re-train them every two years.

We commit to working with the

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communities, to understand community priorities. We will work closely with the Community Liaison Committee. We will continue public meetings and consultation.

The original Community Liaison Committee that was in place in 2002 and 2003 had 15 meetings. We have held a significant number of public meetings. We have had an open office policy for almost five years.

People can drop in, find out what is going on, how to apply for jobs and all the other information that they want. We will maintain that. We will communicate. The monitoring reports will be transparent. They will be available to people. We will present the results of environmental audits, and we’re quite prepared to discuss, either through the CLC or through other discussions, the options for improvement.

We will continue to invest in the community. We will continue to sponsor health, education, heritage, sports, youth, seniors and community organizations.

The Claytons and Bilcon considers this to be a very important part of being in business in a community.

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Safety. We commit to the highest safety standards. We will put in as we construct things like catwalks on all the conveyors, computerized automatic shutdown controls so the plant can be shutdown independently, state of the art ignition systems, safety training programs, and because this plant is new, we can do these things.

We will commit to entering into research partnerships. The Claytons have a history of doing this and we are well prepared to do it either with Government or with NGOs to advance the knowledge of environmental issues.

Just to note the state of the art ignition systems, our vehicles will not be able to be driven away, stolen, improperly used because only the right person with the right key, which is computer controlled, can start that vehicle at a date and time, and it cannot be started five minutes before that. So we have security throughout the plant site.

Why we think Whites Point Quarry makes sense? It’s economically feasible, and we believe it has an environmentally sustainable approach.

Well-understood proven techniques and a very simple straightforward operation. This is not a complex operation. We blast rock, we crush it, we

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screen it, we wash it, we ship it.

All this will be done with modern leading edge technologies, and we will comply with all regulations and all guidelines.

We will have a qualified, motivated workforce. We believe that they exist in this local area. I may say that at the present time, we have over 450 applications for jobs in our office, and we have not advertised for any position.

The company will have a bias in favour of local workers, goods and services. We will provide a safe and healthy workplace.

We believe that there will be significant economic spinoffs in the local area. We believe this will contribute to a healthy community now and in the future.

If I just note the small picture at the bottom, those are local young people who got the impression that Bilcon was not going to hire locally and were very concerned. They approached us and asked us to attend a meeting in Little River. Now these are people local to the quarry area.

About 40 people showed up and expressed their concern that they would be considered for positions on this quarry site, and we assured them that
they would be given priority.

Why does this project make sense?
There is a well-established successful ownership. The company has a strong track record of investing in the community. There’s no taxpayers’ money involved in this project.

I think that we have the resilience and the dedication to establish a quarry which matches the quality of the people in the local area.

Just a little summing up. This will be a state of the art quarry operation, well-understood proven technologies. There will be comprehensive environmental safeguards.

We commit to ongoing community involvement. We commit to disclosure and the transparency of performance. We will make and continue to make long-term economic investments, and we believe that this is a contribution to sustainable development.

Our vision is that this quarry will represent a good corporate citizen, a state of the art, environmentally-sensitive operation, a part of what we hope will become a strong diversified local economy, an example for habitat creation and re-creation and conservation, and an example of active support for

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research, training and education.

Thank you very much.

THE CHAIRPERSON: Thank you Mr. Buxton.

It will be a moment while we get ourselves in order. You are a little bit ahead of schedule there. Can we turn that thing off? The projector is shining in our eyes. Wonderful, thank you.

Thank you Mr. Buxton, that was very clear and very concise, and very informative as well. We will begin the questioning of you and your colleagues, but the questioning that we decided to embark on first will be not specifically to do with this presentation.

What we would like to do is touch on a few overriding issues, which will be consistent throughout the entire two weeks, so we will get to the presentation very shortly, but I just wanted to let you know that we would like to discuss four or five things first which we think are fundamental, and these are things which were in the guidelines and which you already addressed.

What I would like to do for the moment is start with a discussion of the guidelines themselves. I wonder if you... Do you have a microphone? Yes, you do. Could you tell us what the relevance and the
importance of the guidelines are?

And there is a point to this
questioning, but first of all I would like to hear what
you have to say. You received the guidelines from us,
you responded and produced an EIS, and I’d like for you
to verbalize to us what you think those guidelines were
designed for.

Mr. PAUL BUXTON: I think they are
designed to set out the parameters over the Project as a
whole, what the Project is, where it is, how it is going
to be conducted, what the environmental effects are and
I think that they probably to some extent came from
standards, questions which are asked in this kind of
context.

The physics of the guidelines came from
concerns that were raised in the community, concerns
that were raised elsewhere with respect to this
Project.

We saw them as a framework to explain
what we were going to do, why we were going to do it,
what the processes were that we were going to undertake,
what environmental effects would come from those
processes, how we would attempt to mitigate those
effects, how we would monitor the effects, and what the
residual effects would be from this process.
And that of course includes cumulative effects as well as the individual effects of specific activities.

So we saw this as a composite picture of the project to explain why we need the project, why it’s there, what we’re going to do, what the effects would be, how we would mitigate them, what monitoring we would carry out, what the residual effects would be.

THE CHAIRPERSON: How do the guidelines relate to the process we’re in right now?

Mr. PAUL BUXTON: I think the guidelines that are set... In fact the guidelines, these are the elements that are foreseen to be important and essentially the subjects which would need to be discussed in this forum throughout the entire process.

I think it sets the basis, the guidelines for the entire process, which includes of course the panel hearings themselves.

THE CHAIRPERSON: What would be your view of you and your colleagues’ adherence to the guidelines, do you think that you have done a good job with them?

Mr. PAUL BUXTON: I think that we struggled with the guidelines Mr. Chair. We did not find the guidelines easy to follow, which is why we
restructured our Environmental Impact Statement as we structured it.

The subjects were raised and re-raised in various elements of the guidelines, and we found it difficult to have an Environmental Impact Statement that was easy to follow and comprehend.

I think that we made the best efforts we could to follow the outline of the guidelines as they were set out, but I can repeat that we had some difficulty in doing that.

I think by the end of the process, by the time we had responded to comments, various comments from yourselves and from the regulators, I think that we did in fact encompass what the guidelines were intended to do, and to provide the information that was requested.

THE CHAIRPERSON: Perhaps I will offer my view now in that the guidelines are generally perceived as a minimum requirement for the Panel.

The Panel defines the task in front of it and then puts in the guidelines the minimum amount of information that is necessary to make a decision.

The reason I bring this up is that we have, as a Panel, enumerated at least 50 places where we
have requested specific information and that information
has either been partially returned to us or not returned
to us.

So in our mind, your EIS has many gaps
in it, and the relationship between the guidelines and
these hearings is that we will, over the next two weeks,
return to all of those places within the EIS where there
are deficiencies, and we will be asking for elaboration
on them.

Now some of them, various reasons have
been offered for not providing information, and in some
cases the information is just not sufficient.

So all I am saying is that for us, the
guidelines are a road map or a blue print to what we
need to make an appropriate decision, and at the moment
the information available to us is not complete.

So the hearings are a way of completing
that information and one of the things that we will be
doing during the hearing process is returning to those
particular items.

So I just think it’s important for you
to realize that the guidelines were seen by us as a
minimum of information, not a framework. In addition to
a framework, they were requests for specifics. Do you
have anything you want to add?
So following that, what we would like now to do is to talk a little bit about some of the guiding principles which we enumerated or identified in our guidelines, and those principles were stated early on, and they involved several things which you have responded to, and things such as traditional knowledge, public involvement, sustainable development, the ecosystem approach and so forth.

These things are cross-cutting issues, the turn up throughout the entire process. They turned up in your EIS, and they turned up in our guidelines in many, many different places, so we need to get some clarification and some development of these ideas, and so what we would like to do is touch on them in msequence to get a sense of common understanding of these things.

What we will do is we will turn initially to the traditional knowledge and the public involvement.

Ms. JILL GRANT: Can you please give us an idea of what your understanding is about what traditional community knowledge requires in the EIS?

Mr. PAUL BUXTON: The...

Ms. JILL GRANT: The place that's traditional in community knowledge, how you see that

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sitting in terms of the overall contribution of
knowledge to the environmental assessment?

It’s one of the key principles which is
articulated in the guidelines and in CEAA documents as
well, the requirements to...

Mr. PAUL BUXTON: We saw it as an
important element, adding detailed substance to a
scientific look, and I think we made very significant
attempts to gather all of the traditional knowledge that
we could get in the area.

As I mentioned in the presentation, we
held I believe 15 Community Consultation Committee
meetings. We held a significant amount of additional
public meetings. We met with groups, we met with
fishermen groups and we conducted an extensive series of
interviews with local people to give us the background
which we call the traditional knowledge.

I think that we did in fact gather a
significant volume of information which we found
important to the process to add this knowledge to our
design approach and to our mitigation approach.

I’m not sure whether you want me at
this time to sort details of the sort of things that
were picked up along the way, but they certainly had
significance for us and we considered them to be
important.

And I think the knowledge, we got into a three-month exercise in the beginning to find out what the traditional knowledge was. And this has been ongoing. We have people stopping into our office on virtually a daily basis who helped us with things like fisheries issues, background in the fishery, what used to be carried out on the site, the use of the site in the past.

And I think that we have developed a significant traditional knowledge base, and we have used that knowledge throughout the process.

Ms. JILL GRANT: And can you give us an indication... One of the information requests was about ocean conditions, and I wonder if you could give us an idea of how you have tried to incorporate traditional community knowledge about ocean conditions in things like the design of the marine terminal?

Well first of all, I think I should make it clear that the marine terminal is not designed. The conceptual design of the marine terminal is in place.

What we did for example on the source of information that would be required for us to do a conceptual design is that we would go to more
traditional sources initially. We would go through the
literature to find out what typical wave heights are,
what the currents are, what the winds are, the general
climate, whether there is ice, the number of fog days,
et cetera, et cetera.

But we have certainly talked to
fishermen who come in the office to ask about usual
conditions, how they found the conditions in the... Not
just the Whites Cove area, but in the general area of
the fishing lanes, and I think that we have received
some very useful knowledge from these people that use
the waters on a daily basis.

But I would like to emphasize again
that there is a far different level of standard required
for a detailed design than there is for a conceptual
design.

We have taken this project to a
conceptual design stage so that we know in general terms
what needs to be done.

I could not tell you at the present
time whether the pipe piles need to be 42 inches in
diameter or 39 inches in diameter, nor could I tell you
in fact what the thickness of the steel is required for
a pipe pile, but we can determine what the effects of
putting that pipe pile down into water are and how much
habitat is going to be destroyed, et cetera, and whether
or not it will generally affect currents or tides or
marine environment.

So I think it should be clear that
virtually all the aspects of this site... The detailed
design has not been done.

We would be required to do and we will
do use of consultants’ experience, very specific
oceanographic studies, wave studies, wind studies
specific to Whites Cove and its effect on the marine
terminal.

But we felt that the information that
we gathered through traditional sources, that is to say
the sources through information and through background
which is available and research, and I think by what we
have heard from local users of the water, that we feel
very secure in our conceptual design.

Ms. JILL GRANT: The effects that are
predicted from the conceptual design, do you see the
effects as conceptual too? How do you predict the
effects without some detail of this information on the
marine terminal?

Mr. PAUL BUXTON: Well, I think that the
conceptual design is not just the statement that we
would require pipe piles, much more goes into it than
that.

We have been consulting a very experienced marine terminal designer who is here today, and who could answer very specific questions, who has built these marine terminals. In fact, he built one very recently which has just become operational.

It is really not a question that the pipe pile is 50 feet in diameter. We know in general terms what it is.

It may vary. The thickness of the steel may vary slightly. We know what the bottom is, we know that we don’t have to deal with thick sediments because we have the visual evidence of that, so we do have a very extensive amount of knowledge.

When I say that we have only done a conceptual design, this is a fairly technical and sophisticated point.

But I believe that we have sufficient information and that the sizing that you saw on the cross-section of the marine terminal is adequate to determine what the effects may be, and we know that by the construction of the marine terminal, we will destroy fish habitat.

We completed the necessary documentation for the Department of Fisheries and

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Oceans. We have had extensive discussions with the Department of Fisheries and Oceans with respect to the compensation of that habitat.

If we can be precise to the square metre at the present time as to the extent of the compensation? The answer is no. But the general principles are there and we came to an agreement with DFO with respect to the type of compensation, to the amount of compensation which is legislated, three times of the habitat which we destroy must be compensated.

So whether it’s 200 metres or 205 metres, that will be determined in the final compensation plans when the detailed design is done.

Ms. JILL GRANT: Thank you. I wanted to ask a quick question about public involvement, which is another one of the principles that’s articulated in the guidelines and to ask whether you had seen the kind of participation programs that you have used as offering meaningful opportunities for the community to express its views and have them taken into account?

Mr. PAUL BUXTON: I believe we have done so. I believe we have done this for five years. We have encouraged people to make contact with us, either in formal groups, or in the Community Liaison.
Committee.

They could come into our office at anytime. We have had an office which I am in every day and I would say that certainly in the last year, we have had five or six people a day come into our office to inquire about the Project itself, some element of the Project, the opportunities for jobs, et cetera.

We have made ourselves I believe fully available. We have sent newsletters to the public in the general area, and I think the level of communication has been extensive.

I don’t believe that anybody could say that they have not had the opportunity to bring their concerns to our attention.

Mr. GUNTER MUECKE: You just said that you have been gathering local knowledge for some period of time, including knowledge on the local conditions, oceanic or ocean conditions where the terminal is going to be located.

Now I am somewhat puzzled by the fact that we have repeatedly asked to be provided with some information on local conditions and it has never been supplied to us. Could you explain?

Mr. PAUL BUXTON: I don’t believe that that accurately reflects what is in the EIS. I think
that the current conditions, and we will have a marine
geologist here on Wednesday that you can ask the
specific question to, but the current conditions in the
area are quite well known.

The wave conditions in the area, in
that area of the Bay of Fundy, are quite well known.
The wind conditions are quite well known.

Now we recognize that we are in a very
specific position and we may get a horrible combination
of wind and wave which may cause to make adjustments to
a detailed design, but one could argue at this point
whether an eight metre wave is more or hugely more
significant than a 7.8 metre wave.

We think that the information which we
have to have is sufficient for us to go to a conceptual
design stage.

We do recognize that we will need more
information but this information that we need in a
detailed design stage is obtained at very significant
cost over a period of time, and we do not think that it
adds anything to the conceptual design which we have put
forward.

I can’t... We have problems
understanding or perhaps I have problems understanding
why we would need to go to the detailed design stage,
which is what I appear to be hearing, i.e. the contract package stage, with the specifications and the detailed designs to address the concerns of environmental effects.

Mr. GUNTER MUECKE: Perhaps you are misunderstanding me. What I am saying is that it is of concern to the Panel to know what the local conditions are for the site that you have in mind.

We are well aware of the fact that general conditions in the Bay of Fundy have been studied and are known, but when it comes to the local conditions, if you consulted community knowledge, local knowledge, we haven’t seen it.

And you have said that you have some information, and we have been asking for it.

Mr. PAUL BUXTON: The traditional knowledge that was gathered, I think that we did remark on that in the Environmental Impact Statement. We certainly had nothing from any local fisherman or local user of the water that would believe us to be wrong in our conceptual designs.

THE CHAIRPERSON: One of the things that has struggled us for some time is that there is a view offered by you that you have consulted with the community, you have had open houses, and as you have
said your door is opened, and that you attempted to
interface with community members in order to extract
knowledge.

Mr. PAUL BUXTON: Yes.

THE CHAIRPERSON: But when you look at
the responses that have emerged from the community in
response to the EIS, they are almost universally
negative. And in your side, they are almost universally
positive.

The community members say: AWe haven’t
been consulted. The CLC has not worked very well. We
know a great deal about ocean conditions off the coast
because we have been fishing here for hundreds of years.
We haven’t really been consulted. Questions may have
been asked, but it was not a true consultative
process.Æ

The reason why this concerns us is that
it is the cornerstone of the TIA Process. The TIA
Process says that traditional knowledge and public
involvement are the cornerstone of any project, working
with the community, engaging the community in a
meaningful discussion long term.

So there clearly is a disparity, a
disparity which is difficult for us to comprehend
because on one side we are hearing very positive, on the

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other side we’re hearing very negative, and there seems
to be no middle ground.

So I would ask that you reflect on that
for a moment and tell us why that would be the case, why
would there be such a disparity between what you think
is the perfect process or that you seem to think is a
process that has been perfectly executed and on the
other side, the negative side, which seems to be just
the opposite. It just strikes us as unusual.

Mr. PAUL BUXTON: I believe there is an
explanation to this. I believe that anybody that
genuinely wanted to know what the Project was about and
how they could be involved in it and influence it, that
is in its various parts, whether you were concerned
about noise, dust or any of the other issues, that the
opportunities were there, and I think those people came
in to see us, and I believe that they got the
information that they were looking for.

I believe that those people that from a
philosophical perspective did not want to see this
Project did not consult with us and in fact chose not to
consult with us.

We can’t force people to consult with
us. The opportunities were there. I think we provided
them continuously over a five-year period.
And those people that really did want to know what we were doing about the elements of concern came in to talk to us. Those that in fact did not want to know about the elements of the project itself or the specific elements of concern, but who opposed the project from a philosophical perspective, and it is certainly their prerogative, did not consult us and did not want to consult us or be part of any type of consultative process. And you know, I think that that has continued for five years.

THE CHAIRPERSON: Are you suggesting that the burden of responsibility for engagement rests with the public?

Mr. PAUL BUXTON: I did not. What I do say is that if we provide the opportunity and people chose not to take that opportunity, we cannot drag people into meetings. We cannot force them to come and talk to us or if we set up specific meetings to discuss and people do not come, we cannot make them come. Both sides must be willing to discuss.

THE CHAIRPERSON: The burden of responsibility I think rests with the Proponent and it seems to me given the prominent nature that traditional knowledge and public involvement has in the TIA Process, it would seem to me as well that this is something which
should have been pursued more vigorously, or do you feel that you have pursued it as vigorously as you possibly can?

Mr. PAUL BUXTON: I fail to see how we could have pursued it more vigorously. We have made ourselves available on numerous occasions...

THE CHAIRPERSON: But you seem to be saying that you had an open door policy.

Mr. PAUL BUXTON: Yes.

THE CHAIRPERSON: But I’m thinking about workshops, I’m thinking about public engagement, I’m thinking about documents presented, walking people around the site. In other words...

Mr. PAUL BUXTON: We have done all these things. We did site tours.

THE CHAIRPERSON: Then why do we get these negative responses?

Mr. PAUL BUXTON: We did site tours. It has been a difficult process for us to engage in. I have talked to literally thousands of people in the past five years on a personal basis.

I think that we have taken every step in those years. I don’t think anyone can genuinely say that they did not have their opportunity to make their views known to us throughout that process.
THE CHAIRPERSON: I think we will draw that line of questioning to a close. I’d like to move us on to something...

Mr. GUNTER MUECKE: You just stated in your presentation that the CLC was suspended in 2003, that is a couple of years ago now. Could you provide us information on why the CLC was suspended?

Mr. PAUL BUXTON: If I said it had been suspended, I misspoke. I don’t believe that I did. However, there has not been any meetings for over two years.

Mr. GUNTER MUECKE: Sorry, you said something else about 2003, is it 2007?

Mr. PAUL BUXTON: Yes. If you ask the specific question, I will give you the specific answer. The CLC was a difficult proposition to set up.

With my knowledge of people in the local area and people that I have worked with on Digby Neck, and I recall that the responsibility of establishing the CLC lies with the Proponent and we did originally under instruction from the Nova Scotia Department of Environment and Labour.

I talked to about ten people who I thought were appropriate sort of people. They were fishermen, they were whale-watch operators, they were
people who had worked in the area that I had personal
knowledge of. They were agreed to serve on the CLC.

Within three weeks, I was down to three
members and I called the people and they told me that
they could not serve, that they had decided not to serve
on the CLC.

We did go ahead with the small number
and it was added to over the next year or so, until I
believe there were seven or eight members.

There was the Chair who was running a
local business, in fact a gas station and a convenience
store in Centreville. The local lady was of great
interest I think in the local area, and certainly, to my
knowledge, not a committed supporter nor opponent to the
project, and she was felt to be a very neutral sort of
Chair.

The purpose of the CLC was for us to
enable the flow of information from the public and from
the Proponent in both directions, and we were
disappointed that we had so few people representing the
local community.

The Chair continued to sit as Chair
through the 14 or 15 meetings, until we got into the
more formal stage of this process, into the Panel
process. She then declined to call any further
meetings.

She will be making a presentation to the Panel, and I believe it’s on June the 26th, and perhaps it would be more appropriate that the Panel asks her specifically why she did not want to hold anymore hearings or meetings of the CLC Committee.

Mr. GUNTER MUECKE: Thank you.

THE CHAIRPERSON: As I said, I think we will terminate this line of questioning but there is just one further thing I wanted to raise, and that is that I wonder why it is that the 400 individuals that you have on record as wanting jobs in this project were not available for consultation or public involvement?

Mr. PAUL BUXTON: At this meeting?

THE CHAIRPERSON: No, I mean in the public consultation processes in the community. You have made the suggestion that you have 400 people on record as wanting jobs emanating from this project.

Well those 400 people are potential candidates for consultation, are they not?

Mr. PAUL BUXTON: Oh, absolutely. And in the recent past, we have held two meetings on-site. I think there were 23, 24 at the first meeting, 40 out of the second meeting, and they come in on a regular basis to consult with us.
THE CHAIRPERSON: Thank you Mr. Buxton.

Mr. Buxton, we were going to break at noontime. It is 11:55. Before we get into a different topic, I think this is probably a reasonable time to break. We will be coming back at 1:00, okay?

Mr. PAUL BUXTON: Sounds good.

THE CHAIRPERSON: I will see you at that time. Thank you all.

--- Lunch recess at 11:55 a.m.
--- Upon resuming at 1:00 p.m.

THE CHAIRPERSON: Ladies and gentlemen, could I ask you to take your seats please? Thank you. I have been handed two or three housekeeping things which you should be aware of.

First of all, we have been having some problems with the sound this morning, and I’m told that they are working on improving the sound.

The second thing is that there are headsets available and the headsets provide service in English and French. Also, if anyone in the room is hearing impaired in any way or has reduced hearing, I’m told the headsets help so that they amplify the sound, so that someone could consider using that. It is available for that.

And then the third item which I should
bring to your attention is that there was a schedule
passed out this morning that suggested that Bilcon would
not be making an environmental assessment presentation
on Monday. That is incorrect.

The revised schedule, the one that
should have been put together showed that Monday
morning, Bilcon will in fact be making an environmental
assessment presentation. It was inadvertently left off
the list.

Okay. So maybe we can continue now.
Mr. Buxton, we’re going to continue with a couple more
of these things which are the central pillars of the
CEAA environmental assessment process because as I said
before, we believe that they run and extend entirely
throughout the entire process, so we want them clarified
at the front end so that when we refer to them later on,
they will be clear in all of our minds.

The first two dealt with traditional
knowledge and public consultation. Now we move into the
subject of sustainable development, and sustainable
development is a phrase which is widely used, but what
we would like is to know...

First of all, you can define it for us,
what your understanding, what Bilcon’s understanding of
sustainable development is, what it means.
Mr. PAUL BUXTON: Thank you Mr. Chairman. I would like to ask Mr. Uwe Wittkugel to speak on the issue of sustainable development. He has been assisting with this element throughout this process or at least for the last couple of years, and Mr. Uwe Wittkugel, would you kindly respond?

Mr. U. WITTKUGEL: Sustained development is defined by the Canadian Environment Assessment Agency as development that meets the needs of the present without compromising the ability of future generations to meet their own needs.

That is the definition that Bilon agrees with, and yes, one of the principles that the guidelines ask for is the sustainable development principles to be followed by the environmental assessment.

We do think that that has been done. The environmental assessment as a planning crew itself is a tool that does tend to achieve sustainable development.

An environmental assessment is always trying to balance economic development with environmental protection, and it’s at the core of what the environmental assessment tried to achieve.

So the fact that we followed an

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environmental assessment is already an attempt to implement this project with a sustainable development approach.

So far, in so much as the overall understanding of sustainable development, the guidelines also identified I think five points that characterize sustainable development or that relate directly to sustainable development.

We agree with those five points and basically they involve effects on biological diversity. It is an item that needs to be addressed and assessed.

The capacity of renewable resources, they should meet the needs of future generations as per the definition of the Canadian Environmental Assessment Agency.

The preservation of the ecosystem integrity is another important component, also a consideration that this environmental assessment took into account.

The fourth point is the right of future generations to sustainable use of renewable resources. Again, we feel an item that has been considered in the contents of the environmental assessment.

The last criteria I think the guidelines state is the attainment of doable and
equitable social and economic benefits. Another characteristic of sustainable development.

We also think that this Project can be characterized as doing exactly that, trying to achieve this balance.

THE CHAIRPERSON: All right. Could you explain to us how your project will contribute to a sustainable development in Digby Neck, this area?

Mr. UWE WITTKUGEL: Again, I’d like to use the criteria that was set up in the guidelines. I think it’s even explicitly stated that:

\[ \text{You will evaluate the Project and its contribution to sustainability on the basis of key criteria.} \]

The first one is does it make a positive contribution to attainment of ecological and community sustainability?

An example, Paul Buxton indicated this morning the environmental protections. The environment protections will ensure that a plant protected under various legislation will remain within the site of boundaries.

\[ \text{Rare fishes protected under Federal and Provincial legislation will remain on site and will be protected by that protection zone.} \]
That's one example on how sustainability will be achieved as far as biological diversity is concerned. I picked the example of plant life.

Community sustainability now.

Stabilizing the economy we consider is a factor of sustainability. We believe diversity is a factor of sustainability.

By introducing a new long term economic opportunity, we are contributing to the economic sustainability of the community, so that's the second example for making a positive contribution to obtaining ecological and community sustainability.

The second area was listed as the enhancement of positive effects.

Yes, definitely this Project is attempting to not only mitigate adverse effects, but wherever positive effects are identified, we want to enhance them and maximize the benefits.

It became clear in this presentation this morning that Bilcon thinks locally when it comes to procurement of services and goods.

There will be a procurement policy implemented that does exactly that. It puts emphasis on local employment and procurement of goods to the extent...
that they are available in the local community.

So that is an example for enhancement in the socio-economic environment. That is also an example for enhancement in the ecological environment.

I’d like to go again back to the presentation of this morning. We learned that Bilon already has started to enhance the diversity of the forest communities surrounding the Project site.

On its own property, it has established a forest management plan. It is now in the process of implemented that. That is a clear enhancement of biological diversity and ecosystem integrity around the site.

There will be similar efforts spent on the site itself. The incremental reclamation, we learned about that, will take place and will not just establish any type of habitats, but it will aim at a neo-natural condition that will take advantage of the new site conditions.

There are many examples around where quarries have been rehabilitated to conditions that actually exceed the pre-quarrying conditions as far as biological diversity is concerned, particularly in this context, this landscape context where for example wetlands are not very frequent features.
Quite to the opposite, fresh water
wetlands are a rare feature along this landscape.
This Project will enhance that
situation and will introduce new wetlands. There’s
already during the Project operation an artificial
wetland that Paul Buxton pointed out will be already in
place.

Once the project is completed, the
wetlands will be available for establishing new fresh
water wetland habitat and open waters which will benefit
a number of plant and birds species and also mammals,
I’m thinking with the basin in particular.

And that was the aspect of enhancing
positive effects. So I think we can state clearly that
the project intends to do exactly that in the ecological
environment but also in the human environment.

Not the last one, but another aspect
that you listed as a criteria is the strengthening of
local and regional capacities and opportunities to
achieve sustainability.

Yes, I think the project also
contributes to that.

THE CHAIRPERSON: Could you be more
specific about that because I think until now you have
talked principally about environmental issues.
Mr. UWE WITTKUGE: But...

THE CHAIRPERSON: We’re equally concerned about economic and social as well, and as far as enhancing sustainability in the long term in an economical social sense.

Mr. UWE WITTKUGE: Yes.

THE CHAIRPERSON: Does the Project have a role in that?

Mr. UWE WITTKUGE: Yeah, I thought that I mentioned that. I said that there will be enhancing in the ecological environment but also enhancement in the human environment.

In the human environment, I mentioned diversity of the local economy, I mentioned emphasis on local procurement of goods and services, so yes, there is clearly an enhancement of the human environment as well.

Now capacity building, do we enhance that? We think, yes, by involving the community and by providing transparency as far as the project development and operation are concerned.

We are offering a tool that will promote involvement and participation in decision making. Earlier again in the presentation it was mentioned that the opportunities for improving the
performance of the Project will be discussed in the context of the CLC.

This is clearly something where we see the community will be enabled to participate in this Project and will be enable to review its environment performance and participate in the enhancement of its performance if there is a reason or a need for an improvement.

So those are the examples for strengthening the local and regional capacities.

You could go maybe now another step further and think about indirect effects that definitely will strengthen local capacities.

I am just simply thinking about issues such as tax contributions. The tax contribution will definitely enable the municipality to enhance public infrastructure or use it for whatever purposes is needed.

But the influx of additional tax monies will certainly strengthen local capacity in whatever direction the municipality sees it required.

Does it answer your question related to socio-economic benefits and contributions?

THE CHAIRPERSON: Yes, in a sense it does. I mean, your project is not sustainable, it’s

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finite. It will run for 50 years and it will terminate. This is the way it’s designed at the moment.

So I guess what we were looking for was some indication that the project would in fact enhance sustainability within the community in some way. Now you have outlined some things, but it’s all very general to us.

I guess what I would be interested in knowing is that... Something that you have not identified for us is that we need to encourage sustainability in the community.

There is no project here. The Project arrives. The Project brings with it tax dollars, it brings with it employment, it brings with it new things and so forth, and as long as the Project is here, the community benefits.

But at some point, the Project will disappear, it will reach its finite end. Is there any way that you can assess or monitor or describe of measure the impact?

In other words, how do you know what you’re saying will happen? How do you measure it? What are the metrics that you would use, is there any indication of that?

Because you’re making the argument that
it will happen, which is fine, but it then advances the
response: AHow do you know it will happen? What is the
way in which you can measure these things?\n
Yes, we think we can measure these
things and they would all relate to the various factors
that I talked about.

For example, the key to ecological
sustainability is diversity, so there will be monitoring
in place for in particular rare species.

Rare species indicate perfectly rare
habitat conditions. By monitoring that and documenting
for the public, including the CLC, that these plants
remain in place, we will have documentation of
achieving...

Sorry, I thought this interference was
related to your microphone, but maybe it was not.

So we think there’s a measuring stick
or an indicator that allows to measure the
sustainability in the environment sector for biological
diversity, whether we have achieved this or not.

Similar items could be mentioned for
the human environment for example. A measuring stick
simply would be how many employees indeed have now been,
after a year or two, employed. What training programs
has Blicon run through? How many of these employees
were indeed local or perhaps coming in from somewhere? These are all tiny little indications for whether that sustainability under these various aspects has been achieved or not. There is not one cover-it-all measuring stick that can tell you: AYes, we are on level nine on a sustainability scale.\textendnote{1}

These are the factors that we see would be useable, feasible, measurable and could answer the question: "Are we indeed achieving sustainability or at least contribution to it or not?"

Ms. JILL GRANT: I just wanted to ask about the decommissioning and reclamation phase, what are the durable economic and social contributions for a sustainable development at that stage?

Mr. UWE WITTKUGEL: Yeah, and Mr. Chair you had mentioned the long term perspective as well, so maybe a couple of words on that.

Certainly, it’s very difficult to predict from this point on what will happen 50 years down the road. We have no good understanding of where this community will be 50 years down the road, and the role in the quarry within the local economy and its importance, significance, is way beyond what we can predict at this point.
We have to base our judgement on the current conditions and we can design or process in an operation that attempts to achieve or contribute to the local sustainable economy.

So 50 years down the road, what will that reclamation concept contribute to the community? I don’t know. It will depend on what the needs at that time are, you see?

I see many, many opportunities attached to this quarry, and it ranges from total preservation and to perhaps even such things as active recreation.

There are throughout the world examples of quarries doing exactly that, and very successfully. When you take the conservation aspect, you can ask yourself: What do we want to create here? Do we want to the Acadian forest to take over again or do we want to perhaps promote grasslands species?

Grasslands species at the moment are facing a dramatic decline. Perhaps in 50 years, that will have continued and we will feel the Acadian forest has been phased in sufficiently and let’s focus on grasslands species, bird species in particular.

So it would not make sense to define already at this point a fairly detailed level of what we want to do and achieve in 50 years.
Instead, Bilcon in its project
description has outlined the process, how will we go
about it, and that includes consideration exactly as
these things I just mentioned.

What is the status of the community?
What are the preferences? Of course, the locals, the
public will have to and should have a say in that as
well.

What is the economic situation? What
is the pressure on land views? They are all factors
that will have to be taken into account.

The opportunities as I said, they can
range from one extreme to the other extreme. How this
will be addressed in 50 years I think is beyond what we
can and should say at this point.

Mr. GUNTER MUECKE: From your discussion
so far, and focussing again on the socio-economic, it
seems to me when you talk about socio-economic, it’s
largely economic, and I see it in a broader context.

That quality of life, enjoyment of the
land around you and so on are part of that equation in
terms of socio-economics.

And so I guess my question would be in
terms of sustainability, how does the project add to the
sustainability in terms of the quality and enjoyment of
life for people in this area?

Mr. UWE WITTKUGEL: I’m a human environment specialist. We have a specialist coming in on Monday, a week from now, Susan Sherk. She has conducted the social impact assessment.

But from my perspective in a few words, a number of things contribute to a quality of life and I would think that the economy and your job situation, your income situation, is a very important component.

Other components for example are aesthetics, other components are natural environment diversity, opportunities to enjoy nature, et cetera. All those aspects play into the quality of life.

We think that there are no significant adverse effects on those factors. Other factors, there may even be a beneficial aspect.

As I mentioned, the opportunities that come with reclamation may add such features as recreation, perhaps even tourism, even the operation of the facility could offer a point of interest for local and regional recreation and tourism as well.

There are many examples again out in the world where industrial or commercial undertakings have been turned into a destination and experience where people can learn about the use of the environment,
reclamation processes, et cetera.

I see there are many opportunities that will either directly or indirectly relate to quality of life. Otherwise, how is quality of life defined? You have to grab or determine some of these contributing factors, and we have done that and seen that we, as I said, either not cause significant adverse effects or perhaps even contribute in a beneficial way.

THE CHAIRPERSON: Okay.

Mr. PAUL BUXTON: Could I Mr. Chairman just make a contribution again stating quite clearly that I’m not an expert in socio-economics. Susan Sherk will be along to discuss these issues.

I think that very significantly, Digby County and Digby Neck has suffered a very significant decline of population, and it’s very significant, and it tends to be in the 19 to 39 year old age cohort.

When we get loss of population, a lot of things happen. We tend to lose services, we tend to lose for example medical services, which are in difficult state in Digby.

Population drops, we lose doctors. The Ferry service between Saint John and Digby is under threat. These are significant population losses there in the order of 18 to 20 per cent in Anapolis and Digby.
counties over the past 20 years.

I just don't have the figure at hand, but I believe that the population of Digby Neck, we don't have them for 2006 but I believe that I am correct in saying that between 1981 and 2001, there was greater than a 30 per cent decline in population.

Certainly, when you have a decline of that severity in population, and particularly in the working-age cohort, the 19 to 39 year old, I think this is significant.

Class sizes have dropped very significantly. The Sandy Cove School I believe was built for 180 people. It now, I believe, has 47 students.

So we lose our services, we lose our educational facilities, we cannot be able to keep up our medical facilities.

The people between the ages of 19 to 39 tend to be the people who operate the volunteer fire services, the emergency response organizations, and if they leave the area and they are leaving the area, and in significant numbers, they are going out West to work, not out of choice, but out of necessity.

And I would say again as I mentioned in the project description that if we look at rural Nova
Scotia, I think we are a typical example here, but the fishery has suffered a significant decline. The forestry has suffered a significant decline.

The Weymouth Saw Mill closed, 75 jobs at the saw mill, probably 200 to 300 jobs in the woods. Agriculture, apart from the mink industry, is virtually non-existent today.

The tourism industry for the past two years has undergone a significant decline, nothing to do with our efforts in this area but a high Canadian dollar and also other factors.

I think that unless we can introduce some diversity in this area, we are in economic trouble in this area at the moment.

Not only have we lost primary jobs, but for example a number of years ago the Britex manufacturing plant just outside Bridgetown closed. The Shorewood Manufacturing plant very recently closed last year, 230 jobs gone in the area.

We have suffered very significant job losses. We have had some gains. We have a call centre in Cornwallis and other fine industries in Cornwallis, but generally speaking we have suffered a significant population decline and a significant economic decline in this area.
While we don’t pretend that 34 jobs is going to solve that issue, it clearly won’t, but there will be spinoff jobs, and I think it’s the sort of thing that is going to be necessary in the future.

We are not going to have major high-tech industries in Digby. We simply don’t have the personnel to staff them. It would not make any sense for them to come. So we have to deal with what we have here.

I have also pointed out at least one other positive feature, it’s that there’s no doubt that we’re going to have to upgrade the power line to the site.

People who live on the Neck and the Islands will complain I think about the quality of power service to the Neck and Islands.

We think that since we will to pay for it at our expense, an upgraded line at least as far as Little River, it will be a major economic advantage in the area.

I hope that we can certainly expand on this when we have our expert here in socio-economics a week on Monday.

THE CHAIRPERSON: Thank you. I think we will move on to the next topic and the next topic we
have is the eco-system approach.

    Again, maybe we will make the similar
request that we made a moment ago, which was explain
what it means and your conceptualization of the
ecosystem approach, in a conceptual sense, yes, but also
at a practical sense, you know?

    In other words, how has it been applied
in the EIS? Where does it surface? Give us an example
of how it has been woven into the fabric of the EIS?

Mr. PAUL BUXTON: I’d like to ask Mr.
Uwe Wittkugel to respond to that please Mr. Chairman.

Mr. UWE WITTKUGEL: The very simple
definition is that in an ecosystem, everything is linked
with everything else.

    The guidelines are giving a little bit
more sophisticated definition similar to the sustainable
approach, planning approach and are outlining
characteristics of what is an ecosystem approach.

    An ecosystem approach in principle is
one that acknowledges the complexity of environmental
components.

    The environmental assessment is
sometimes a bit deceiving. It breaks everything down in
what we call environmental components, and it may lead
to this perception that everything is dealt with sort in

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I mean we deal with air, we deal with noise, we deal with flora, fauna, et cetera, when in fact in reality these components are interrelated, and that’s what the criteria or the characteristics in the guidelines express.

They are essentially seen as... They are interconnections, they are links, and there are repercussions.

To give you some examples of the interconnections between physical, biological and oceanic environments, it is important to recognize that these entities do not exist in isolation, particularly with the flow of water that we have.

It will all end up in the Bay of Fundy. If the water takes its course down the hill, it will end up in the Bay of Fundy. So those are essential considerations to take into account.

We have to make sure that water does not go into the Bay of Fundy untreated or uncontrolled. The Project has taken that into account and is actually using a piping system which basically operates without discharging any waters.

Nevertheless, Paul mentioned that it may happen and that if so, there’s water that will have
to be released and in that case, there is a concern. What does this water do perhaps to the receiving environment? Well that’s the ecosystem approach thinking.

We are dealing with a terrestrial situation. There’s a runoff in this situation and it may end up in the marine environment. It may have contaminants in it and what will the contaminants do to the water quality? The water quality is only a pathway.

So it very much links this whole concept of ecosystem approaches and pathways, which means that there is a link between a component of the terrestrial environment in my example and the component in the marine environment.

Periwinkles may take up contaminants that are washed into the Bay of Fundy. That is an example. The environmental assessment has taken that into account. The Project operation has taken that into account, the Project design has taken that into account.

Another example perhaps would be links between the terrestrial and the coastal and the oceanic environment.

Again, these terms are all fairly closely related with... I will just give a few other
examples of what considerations were taken into account
that relate to the ecosystem approach rather than
sticking to the individual...

THE CHAIRPERSON: We would be interested
to know how the ecosystem approach has been used in the
EIS in order to assess impacts for example.

Mr. UWE WITTKUGEL: Yes.

THE CHAIRPERSON: And what if we would
take an example of rare plants for example? Has the
ecosystem approach been employed in any way? Can you
give that as an example?

Mr. UWE WITTKUGEL: I will be talking
about that on Monday in a bit more detail when we are
dealing with the environmental assessment, but I’m more
than happy to jump into that now.

The keyword here is pathways. When you
assess effects, you have to consider pathways, and to me
that is sort of the essence of the ecosystem approach.
You’re not just looking at something in isolation, you
look at how is this feature or component of the
environment linked to other components and other
pathways in between that could affect this feature.

So typically there are direct effects.
Let’s say there is a rare plant and you trample on it,
that’s a direct effect.
But there may be other effects such as dust, ground water, pathways, typically pathways, that are causing indirect effects.

And the way that is done is that the expert who assesses the individual, the effects on the individual component has to ask him or herself what are the potential effects here in terms of direct effects and perhaps pathway effects?

So everyone who evaluates effects on a particular environment component, and we call them the valued ecosystem components, will have to go through that exercise of identifying potential effects that relate to either direct effects or effects resulting from pathways, and that’s the way the environmental assessment deals with it.

Mr. GUNTER MUECKE: Now what you’ve have just outlined is very good in theory. That is the theory behind it.

Mr. UWE WITTKUGEL: Yes.

Mr. GUNTER MUECKE: What I find missing, and correct me, but you said to take a rare plant species as an example. It is the application of these principles, of defining the pathways and so on, in the Environmental Impact Statement.

I look at your rare plants for example,
and I could not find any reference to how the change in hydrology for instance would affect those plants, how the change in air quality may affect those plants. You just told us: ATthese are pathways. These are the linkages we are looking for. We are looking for that. Can you elaborate on that?

Mr. PAUL BUXTON: Mr. Chair, I would like to ask Mr. Kern to respond to that question if I may.

Mr. DAVID KERN: The rare plant, glaucous rattlesnake plant is in a habitat of a coastal headland. The premise for conserving that particular glaucous rattlesnake plant was to preserve the headland or the habitat or ecosystem which that plant exists in.

So in that case, we have taken an ecosystems approach in preserving the habitat for that rare plant.

The coastal bog is another example of an approach to habitat or ecosystem preservation. We have expanded our environmental preservation zones around the coastal bog. We have done the run off studies for the contribution of the watershed going into that coastal bog and we will be determining how much low from
the watershed is required to sustain the coastal bog.

Mr. GUNTER MUECKE: Yes, I understand what you’re saying, but simply isolating areas by not working them or having no traffic across them, it’s only part of the solution because as we have just heard, the pathways are...

The hydrology of the property is going to affect these isolated areas. The air quality in these areas will be affected.

In an ecosystem approach, how is that taken into account? That is basically where I am puzzled here.

Mr. DAVID KERN: We have done a series of baseline studies in these various ecosystems from soils to water quality, items like this. So we have established the baseline for these particular areas.

We will then be monitoring over time any potential effects that may be affecting whether it’s air quality, water supply, water quality to these particular areas.

If we detect a case that is going into the wrong direction, we will then be taking adaptive management measures in order to create a situation for the healthy continuous life of these species at-risk plants.
Ms. JILL GRANT: Could you give us a bit more of a description about what adaptive management means and how the company will use that?

Mr. DAVID KERN: I will pass that back to Uwe.

Mr. PAUL BUXTON: Yes. Mr. Wittkugel, could you help us with that one? Thank you.

Mr. UWE WITTKUGEL: Adaptive management is a term that is closely related to precautionary principle. In situations where there is a certain degree of uncertainty about the effectiveness of mitigation measures, you should... As a measure of precaution, you should have a system in place that can respond to monitoring results very quickly.

So those three components are all very interrelated, the precautionary principle, monitoring, and adaptive management.

It is very simple. Basically what it means is if monitoring identifies inefficiencies or dysfunctions of the mitigation measures or non-compliance perhaps, there should be a mechanism in place that allows to correct the situation, and it should be in place before this occurs so that there’s a quick response.

That’s a system that Bilcon suggests to
have in place, in other words a team that identifies it as a task, monitoring that is done frequently, that assesses any non-compliance, any issues that are identified through that.

The monitoring could also be the CLC, the Community Liaison Committee. It would then result in an assessment of this situation and appropriate adjustments to the mitigative measures.

THE CHAIRPERSON: In the EIS, the phrase Adaptive management at last count was mentioned 140 times. So it strikes us as it is absolutely central to what you are planning to do.

Every time there is uncertainty, it seems that adaptive management has been invoked. Could you be more specific about how it works? Because I would like very much to know how you are going to use it in a specific instance.

Mr. UWE WITTKUGEL: Examples. For example, there will be on a daily basis dust monitoring at the perimeter of the site. There is a standard in effect that Bilcon will need. If for any reason the monitoring indicates that the dust levels are beyond that standard, above the standard, there will be immediately... This will be identified by the environmental team employed by Bilcon and we will
analyse the situation.

Was it a malfunction perhaps of the
monitor mechanism? Was this perhaps because of some
activity outside of the property boundary? Was this
perhaps indeed something that was caused on the site,
maybe because of maintenance reasons or was it really
regular operation that caused this exceedance.

Depending on the answers to these
questions, there will be an action. If it’s obviously
within the property boundaries and operation related,
it’s something that Bilcon can act upon. And again,
there would be...

The environmental team would search out
the source for this, would identify what can be done
about it.

Was it perhaps an enclosure panel that
was removed for maintenance reasons? Is it just as
simple as putting that back on or is it maybe another
procedure in place that has not been addressed?

Is it maybe the water truck that has
not been operational that day? Various causes may be
behind this problem, and this adaptive management is
simply meant to identify this, assess it, and then react
to it expeditiously.

THE CHAIRPERSON: With respect, that

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sounds like trial and error, and it does not resonate
with me in the sense of the way I understand adaptive
management. Or you could argue that that’s passive
adaptive management.

There’s another form of adaptive
management, which is very different from that as well.
Are you aware of that?

Mr. UWE WITTKUGEL: We are also
promoting... Not promoting. Bilcon is committed to
work with DFO for example on the latest research on the
problem of potential for a ship’s collision with whales.

Any new research that may surface, any
new information that will be identified through recovery
plants when it comes to rare species, that information
will be actively researched by Bilcon in consultation
with the research community or in consultation with the
regulators and will then perhaps, if warranted,
introduce totally new mitigative measures that may at
this point not even be within the list.

So there is not only this reactive, but
there is also this pro-active attempt to constantly
upgrade the mitigative measures and the effectiveness.

THE CHAIRPERSON: I will take that as a
no, that you really are not familiar with the other term
of adaptive management. Did you want to go on? I

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think...

Mr. PAUL BUXTON: Mr. Chairman, perhaps Mr. Kern could add to that?

Mr. DAVID KERN: I think Bilcon is taking a precautionary approach to many of the aspects as far as mitigation goes. I will give you a concrete example on that.

In blasting in or near Canadian fisheries waters, we have certain criteria that we have to meet so that we don’t transmit sound pressure into the marine environment.

We have taken the precautionary approach with a SARA lifted species, the Bay of Fundy salmon, to increase on a precautionary basis the separation zone three times when we do blasting, when the inner Bay of Fundy salmon may be near shore waters.

So in using the precautionary approach in that case and using our monitoring results in association with guidelines or thresholds that exist, we think the precautionary approach and the mitigation and the adaptative management all work hand in hand.

Mr. GUNTER MUECKE: Could I come briefly back to the ecosystem approach? What I am concerned about is temporal and spacial boundaries of eco-systems, and how Bilcon defined these boundaries in
the case of the impact statements?

Mr. PAUL BUXTON: I’d like Mr. Wittkugel
to address that please.

Mr. UWE WITTKUGEL: Yes. Boundaries are
very important components in the ecosystem approach.
Every valued environmental component or every component
of the environment has sort of its own field that
exists. So any environmental assessment should take
that into consideration.

We have done that in the environmental
assessment. For example, human environment. Obviously,
it’s not just the site, it’s not just the homes that are
adjacent to the site, you have to look at the larger
context.

This is a Project that has implications
for the community, perhaps even the region’s natural
environment.

We are dealing with a terrestrial
component and we’re dealing with an aquatic component
here for the species at risk.

In the marine environment, it’s not
sufficient to just look at the ship loader and the site
itself, we also have to take into account where is the
vessel going and where is it coming from, what route is
it taking, what biota are existing in that environment?
So we are extending the study area or the area that is assessed accordingly.

For plant species for example, we again started out at a regional level in accordance with the guidelines from the Nova Scotia Department of Natural Resources and looked at a 100 kilometre radius, what potentially rare species may occur in that area, and then narrowed it down to what is likely to occur on the site and did targeted surveys.

So that is another example for how we applied a different study area, a different spatial boundary for the inventory and then of course also for the effects assessment.

Mr. GUNTER MUECKE: Could I come back to time boundaries, temporal boundaries. To define the functioning of an eco-system, is it sufficient to take one or two points in time and extrapolate those over the life of the...

Mr. UWE WITTKUGEL: In a more general response, the environmental assessment did have various time-lines. There’s a construction phase, there’s the operation phase and then there’s the decommissioning/abandonment phase.

Each phase comes with its own set of effects. Blasting we heard will be more frequent during...
the construction phase. Thus, we have noise also
perhaps increased during the construction phrase.

So we did take those different
spatial... I'm sorry, temporal phases, into account
into the assessment.

Mr. GUNTER MUECKE: Okay. We could
perhaps move into what has already come up several
times, precautionary principle and the link to adaptive
management.

I guess I'm wondering how does Bilcon
view this precautionary principle in the context of
climate change?

Mr. PAUL BUXTON: Mr. Wittkugel will
respond to that.

THE CHAIRPERSON: Thank you.

Mr. UWE WITTKUGEL: One of the
principles or one of the characteristics of the
precautionary principle is avoidance. It's best to
avoid certain impacts. That is what is proposed as far
as impacts on for example greenhouse gas emissions are
concerned.

There's an avoidance of [inaudible] on-
site and there's an avoidance of truck traffic in terms
of hauling product out of the site. Instead, the vessel
will be used.
So largely the emissions from combustion engines is avoided through the application of power driven machinery. The only combustion engines will be related to the mobile machinery on site.

So the avoidance is an example for the precautionary principle in this context.

Mr. GUNTER MUECKE: If I could draw your attention to the sediment ponds. Was the climate change... Has it been incorporated as a precautionary principle in the design of the sediment ponds?

Mr. PAUL BUXTON: I'd like Mr. Strajt to comment on that please.

Mr. DAVID STRAJT: We looked at the volumetric sizing of the ponds, and looked at the sizing for the 100-year storm, which is typical sizing criteria, and then looking at some of the guidance on climate change, it seemed to indicate that the frequency of occurrence of such a storm would possibly increase, and also a small change in the amount of precipitation.

It was more of a frequency increase than a quantity increase, so the ponds... The capacity of the ponds as they stand now we feel would be sufficient to handle the increased volume.

The volume that is predicted from a storm, it would just be more of a need to handle that
potentially more frequently.

Mr. GUNTER MUECKE: Okay. I take your answer at this stage, and perhaps when we start having more particulars about the sediment ponds, maybe you could illustrate for us just how this is going to work in detail and how the climate change component comes into play.

THE CHAIRPERSON: One last question about precautionary principle. Risk assessment, formal risk assessment is considered part of the precautionary principle. Can you point to any formal risk assessments which have been done?

Mr. UWE WITTKUGEL: I would like to point out that the coming... Not this Monday but the 28th I think, the 26th, there will be an expert with a team. He is a risk assessor and we have not undertaken a formal risk assessment, but it's sort of a precursor of an assessment of the risk that may be faced, and I think he's the right person to give a more elaborate answer on this.

The short answer is that the precautionary principle has been taken into account, has been applied, has been looked at, but it's not what I would call a formal risk assessment.

Ms. JILL GRANT: One of the elements of
the precautionary principle that is spelled out in the
guidelines is a requirement for verifiable scientific
information, and I wonder if you might comment on the
adequacy of some of the baseline information provided in
the environmental assessment as to whether it provides
enough information to satisfy that?

Mr. UWE WITTKUGEL: There’s definitely
component dependence in some aspects. There’s little
information available, particularly when you think about
such things as cumulative effects. There’s little
information on the other projects that you may want to
take into account, so you are stuck with what is
available, publically available basically.

Whereas the other aspects, when it
comes to the national environment for example, I think
we have excellent data and we have records from the
Minister of National Resources complimenting us exactly
on that, that the inventory was exceptionally thorough
and the qualification of those people who were involved
in it was excellent.

So it depends which part of the
assessment you’re referring to. In general, I would say
yes, we have very good data, and scientifically acquired
data that allow for the most part an adequate assessment
of the potential effects.
Mr. PAUL BUXTON: I could please ask Mr. Kern to elaborate a little on some of the baseline information that has been gathered to round that answer out a little.

Mr. DAVID KERN: The baseline data was all gathered by scientists in the profession, whether it is copper analysis, the soil analysis or... They were all done by recognized laboratories by standard procedure.

The data that Bilcon gathered as baseline data in the marine environment was all done according to scientific standards, whether it was vital planking, contamination of bottom sediments, we feel we have a very good baseline, scientifically sustainable baseline data that we have gathered over almost five years with the Project.

So we have a temporal aspect to a great deal of the baseline data as well. It is not point in time data. Much of it is over time.

THE CHAIRPERSON: I think we will break off on this topic for the moment, but on Monday we will come back and talk about baseline data again, okay? It will be more in keeping with the topic that you will be presenting at that time anyway.

I would like to move us along and we
are going to move to a different topic. But before I do, I have a question for you Mr. Buxton. Is anybody from the Clayton companies here? Is anybody from the Clayton companies intending to be here throughout these hearings?

Mr. PAUL BUXTON: No, they’re not. No, I am representing Bilcon of Nova Scotia at these hearings.

THE CHAIRPERSON: Thank you. So over to you.

Ms. JILL GRANT: Perhaps you might explain to us a little bit about what the nature of being a subsidiary of Bilcon of Delaware implies? Give us a better...

You talked a little bit about the corporate structure, but it’s not entirely clear to us so perhaps you might just clarify that a bit?

Mr. PAUL BUXTON: I’m not quite sure what you’re driving at, but let me give it a try.

Clearly this particular proposal came from the Clayton Group, because they have the requirement for the material in their current operations.

Bilcon of Nova Scotia is a separate company. It is registered in the province of Nova Scotia.
Scotia and the decisions made with respect to this project are made in Nova Scotia to this point.

Upon the completion of this process, through construction and operation, the decisions will be made in Nova Scotia, not by me at that stage, but by Mr. Wall who is the Operations Manager.

So while the funding certainly will come from a parent company and the product will go to the parent company, all decisions with respect to hiring, sourcing and the decisions being made with respect to any aspect of the quarry are being made here in Nova Scotia.

Up to this point in time, it’s by myself and in the next stage of the process, they will be made by Mr. Wall. Does that answer your question?

Ms. JILL GRANT: I think so. I think so.

Mr. PAUL BUXTON: Okay.

Ms. JILL GRANT: And can you explain to us what experience Bilcon of Nova Scotia and its various parent companies have in aggregate mining?

Mr. PAUL BUXTON: My understanding is that they have significant experience in sand. They operate three sand pits in New Jersey. They also operate a fairly major dredging operation which actually
dredges New York Harbour and the aggregates are landed. To my knowledge, they have little experience as a corporate entity with coarse aggregate mining.

So does that answer your question satisfactorily?

Ms. JILL GRANT: Yes, thank you. And one other question.

Mr. PAUL BUXTON: Yes.

Ms. JILL GRANT: In the environmental assessment impact statement, it indicates that Clayton has no major environmental violations.

Can you indicate what environmental violations there might have been that were not major violations?

Mr. PAUL BUXTON: Yes, I believe I can. And let me first of all give you a little sort of scope of their operations.

They operate, and I think I’m correct in saying this, something like 25 to 30 concrete plants. They have 550 concrete trucks on the road, and about 300 other vehicles. They operate major block plants, and et cetera.

During the operation of these facilities by a staff of over 850 people, one always

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gets the odd callous person who fills minor amounts of
gasoline carelessly filling a vehicle, et cetera.

That is to my certain knowledge the
extent of so called Aenvironmental violations=. They
are violations, in fact one must report these things and
they do report them and hence, they get report cards.

But in terms of what I would call a
major violation, i.e. a corporate act, a deliberate
failure to follow regulations and compliance procedures,
no, they do not have.

THE CHAIRPERSON: Does Clayton have any
other additional international interest? I realize
they’re involved in something in New Brunswick, but
aside from that are they involved in anything else
internationally?

Mr. PAUL BUXTON: The involvement in New
Brunswick is extremely peripheral if I could put it that
way. The Bayside Quarry is operated by other than
Clayton interests, however the Claytons have a marketing
distribution on Brooklyn Sand and Gravel, which operates
out of New York, and a fair amount of the quantity of
material from Bayside goes to New York.

In that operation, Clayton is a 50 per
cent partner and is the managing partner. So while they
distribute a portion of the product from Bayside, they
have no corporate ownership interest in Bayside.
THE CHAIRPERSON: So it’s correct to say that this would be their first international operation in which they will be starting it up and running it, is that correct?
MR. PAUL BUXTON: That is correct.
MR. GUNTER MUECKE: One of the requirements in the Panel mandate is that it looks at the alternatives to and alternate needs of the corporation that you are proposing.
So I would like to address first of all alternate locations and from the environment impact statement, there is some indication as to why alternate sites on the Canadian Atlantic Coast were rejected, but there’s no indication as to why the Eastern Coast of the U.S. was not considered.
New England and so on would place the quarry much closer to Clayton operations.
Mr. PAUL BUXTON: Yes, much closer geographically but not much closer from the perspective of shipping.
The most important reason why a project like this becomes viable is because of the cost of shipping versus the cost of moving rock by road, and if I can bring that into a little bit of perspective, it
would be fairly reasonable to assume that moving rock by
road in New Jersey or New York or perhaps any of the
northeastern United States a distance of perhaps a
distance of 40 to 50 miles by truck is the equivalent of
shipping it from the Bay of Fundy by sea.

And so the crucial factor here is the
convergence of a supply of high-quality rock right by
the seashore where it can actually be loaded onto a

ship.

The minute you start moving this
material... So if you go five, eight miles inland, it
does not sound like very much, but you have to create a
stockpile inland, you have to load it in a truck, you
have to drive that truck, dump it, create another
stockpile, and then pick it up again and put it onto a

conveyor.

When you look at this factor, you can
very quickly discard... And they were discarded. We
looked at it fairly extensively in terms of numbers, but
we came to the conclusion that they are simply not
economically viable.

This sort of quarry operation...
And we showed two this morning, one is the Sechelt, one
in Vancouver Island but with the Orca project which has
just been commissioned...
And perhaps I could refer you to the Porcupine Mountain Aulds Cove Project by the Canso Causeway.

There you see the rock absolutely by the shoreline, and that is a given economically. You can’t... You could find places. There are certainly mines in New York, also some quarries in New York, Pennsylvania and indeed in New Jersey, but now you’re talking about moving it by road, and if one goes on the Hudson River where there is plentiful rock, you’re talking about bringing it by barge, by a 5,000-ton barge, and the economics simply go away.

So just to sort of add to that, aggregate rock is a low value mineral. Nickels and dimes on the price make a significant cost effect.

If we were talking perhaps about gypsum as we do here in Nova Scotia, it could be transported by train before it goes on the ship loader.

You can’t do that with aggregate rock unless it is an absolute necessity, that there is no alternative to that.

And of course in some parts of the United States, I’m certainly aware that it may have to be shipped by train after it comes off the ship 200 or 300 miles, but there’s no alternative to that and they
have to pay the cost at the other end.

But clearly from our perspective, we have to have a source of high-quality rock right on the sea where it can be directly loaded onto a vessel.

Mr. GUNTER MUECKE: Thank you Mr. Buxton. I realize the economics of aggregate and road versus ocean transport but I don’t think you have quite answered the question I asked because there is a coastline on the Bay of Fundy which is in the U.S., Maine being an example.

And to my knowledge, there are rock types which are for aggregate mining. So perhaps just to answer my question as to why Nova Scotia as opposed to the U.S. coast?

Mr. PAUL BUXTON: I’m not sure that I can answer that in full. What I can say is that a study was made of the quality of rock, and there were differences in the quality of rock.

If for example one has the choice between granites and basalts, one would chose basalts by a very large margin because they are far less abrasive to machinery and basically they produce a high-quality rock at a cheaper price.

So if we were looking at an area or different areas where we could find basalt rock as
opposed to granite, then we would certainly concentrate
first of all on the basalts and see whether there were
any opportunities in that area, deep water and all the
other aspects that I talked about in the project
description, that we have sufficient land base and so
on.

And I would think that the primary
reason that the coast of Maine was... I won’t say
totally discounted, but because of the quality of rock.
Certainly the basalts here are highly desirable.

They have been identified by the Nova
Scotia Department of Natural Resources as highly
desirable, and really once you have built the ship
loader and you put the material onboard the ship,
perhaps 100, 150 miles extra carriage really does not
increase the price that much.

So we would certainly, over the length
of the Project that we’re contemplating here, 50 years,
far sooner take a higher quality aggregate in a basalt
formation than perhaps 100 miles closer to its
destination with a lower quality granite rock.

And I might add too that the quality of
the rock is of extreme importance. There are very high
standards and very specific standards for the rock that
can be used in New York or in New Jersey on concrete
projects.

The government standards defines the abrasiveness of the rock and as a geologist, you would understand the various hardness and so on that are measured.

This rock is a very high-quality rock, there’s no doubt about it, and we would certainly have focussed fairly quickly on basalt formation.

Mr. GUNTER MUECKE: Okay. Thank you for that. And so what you are saying is that the transportation costs and the quality of the rock were the main determinants in locating where you are at the present time.

I guess one of the questions I would have is how much was the decision influenced by the coastal management strategies of states and provinces and environmental regulations?

Mr. PAUL BUXTON: I don’t believe there was any influence at all. Coastal management is in place as you know in New Brunswick for example, and it is basically up to the Committee, the Planning Committee of each coastal zone to basically set its standards.

It does not necessarily prohibit quarrying. It might in some areas, but it may not in others.
I think if it came into force at all, which I don’t recall, it would have been long after the shipping routes, deep water, high-quality rock, the available large parcel of land, the relative Aspacity of residences in the area, so a creation of minimum disturbance.

And certainly we were well aware right from the beginning of this project that once one got into shipping, then we would certainly be getting into the elements of the whale population in the Bay of Fundy, and it was of great significance to us that we could bring a shipment to Whites Cove without going through the North Atlantic Right Whale Conservation Area.

So I don’t think there was even the tenth of 1 per cent element in terms of lack of coastal planning or lack of zoning in Digby County for example. I don’t think it had any effect at all to answer.

Mr. GUNTER MUECKE: Okay. And I have one more question. There are a number of coastal quarries in Atlantic Canada. So one of the alternates which was open to Bilcon would have been to acquire an existing quarry. Now was there any attempt made to do this?

Mr. PAUL BUXTON: Apart from I think
some very preliminary discussion with respect to
Bayside, which commenced and terminated very quickly, I
have no knowledge whatsoever of any attempt by Bilcon to
take-over an existing quarry.

We did look again fairly quickly at a
quarry in Cape Breton and determined that for a
significant number of reasons, the quality of rock,
water depth, that it really did not suit our purposes
and would not be an economic proposition to us.

Apart from those two, no there were no
other attempts to negotiate with another company.

Mr. GUNTER MUECKE: Thank you.

THE CHAIRPERSON: I think we will take a
break now for 15 minutes.
--- Recess at 2:30 p.m.
--- Upon resuming at 2:50 p.m.

THE CHAIRPERSON: Okay. We will
resume. Mr. Buxton, I understand you have a comment to
make? We can’t hear you. Hello? Thank you. Mr.
Buxton?

Mr. PAUL BUXTON: If I may Mr. Chairman,
we do have a couple of experts here today who
specifically have come, one from Vancouver, to help our
understanding of for example terminal construction and
aspects of the terminal, and we did specifically bring
them in today to talk about the elements of the
Project.

I just would like to make the point
that they are here today and can perhaps add to the
content of the proceedings, because they are the experts
in these matters. Thank you.

THE CHAIRPERSON: Thank you.

Ms. JILL GRANT: Just to follow-up on
the discussion we were having just before the break
about the regulatory context and whether that played any
role in the choice of the site, I just want to draw your
attention to the minutes of the CLC from the 25th of
September, 2002. In those minutes, there’s a note that
says:

AMr. Wall noted as difficult as it
is to get a permit in Nova Scotia,
it is truly not of magnitude and
is different from the States.∞

I wonder if you could clarify what this
implied?

Mr. PAUL BUXTON: I think that there’s
certainly some evidence that some of the sites, and I
would not profess to be an expert, but where it has
perhaps reached the stage of impossibility to get a
permit.
I certainly don’t profess to be an expert in permitting of any facility in the United States. I do believe, which would add credence to the comment Mr. Wall made, that a quarry has not been permitted in New Jersey since 1965.

Their supply of rock is probably...

Some of the quarries which are now in existence are perhaps down to 10 to 12 years of supply left.

When they close, then that supply will not come onto the market in New Jersey, and in fact virtually all the rock into New Jersey will have to come from New York, Pennsylvania or be imported by boat.

So I don’t think that there was any broad context in that in a general sense in the United States, or at least I can’t add to it, but certainly with respect to New Jersey there is some substance in that, in that it would be a very difficult if not impossible situation to get a permit for a quarry in New Jersey.

Ms. JILL GRANT: Just a couple of questions around the property. Given that the production is anticipated to go for 50 years, can you explain to us why you have a 90-year lease on the property?

Mr. PAUL BUXTON: I think I negotiated
the lease, and in all lease arrangements there is a significant advantage to get the longest possible period that one can get.

Certainly, we are not contemplating being there for more than 50 years because there is only a 50-year supply of rock on the site, but let us suppose that there was some sort of...

I don’t know, perhaps a huge economic decline, major recession, some sort of event at a place during the life of the quarry that meant that the shipping became difficult, that in fact production had to be reduced for a certain amount of time, we have a capital investment in the Project and it just simply makes good business sense to extend a lease period beyond the very specific period which you are dealing with.

So I don’t think there’s anything contemplated, but certainly it’s very difficult to predict what would happen over the next 50-year period, and it’s just simply a good business decision to get some leeway on that lease.

Ms. JILL GRANT: And the buffer, what are called buffer properties that have been purchased by Bilcon of Delaware in the vicinity of the Project, there are a number of different kinds of uses that are
suggested for those properties in the EIS, buffer habitat areas.

What prevents that from eventually becoming added to the quarry project site?

Mr. PAUL BUXTON: I think what primarily would prevent it is the Project footprint, and we have sufficient rock on the existing site to satisfy the demand for a 50-year period, so there’s no reason for us to go outside the footprint.

We have taken the position for a number of reasons that if land becomes available, i.e. is put on the market, and it is adjacent to us, then we will compete for that land to increase our buffer stretch.

If somebody in the immediately local area may feel that perhaps they want to leave the area... In one particular case, there was a medical emergency, they required money very quickly, and we were able to consummate a sale with them very quickly.

If somebody perhaps felt that they did not want to live next door to a proposed quarry and we felt that it was in a zone of influence close to the quarry, then we would negotiate with them.

Generally speaking, we have either acquired property that has come onto the market or people have come into the office has it has happened in

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the recent past, and offered their properties to us, and
due to feelings that they were in the zone of
influence...
For example if they had drilled wells,
which we will deal with under hydrogeology, we would buy
their properties.
The last two were negotiated outside of
real estate companies. People approached us close to
the property. We suggested that they got an appraisal
of their property, and I believe that we have certainly
paid them full and a fair market value for their
property.
As to the use of the land, we consider
it an advantage to have a buffer that we can control,
additional preservation areas around the quarry
property. It prevents problems in the future where
people might want to build and then sort of say: AWell,
now that there’s a quarry here... We had not noticed
that there was a quarry here...Æ
We have no intention of employing that
land other than as buffer strips. We have made the
statement that if the local community wants to come to
us and approach us for perhaps other uses of the lands,
we would contemplate that.
At the present time, in accordance with
the forest management plan, we have allowed some local
people access to our property to cut winter firewood at
no cost, provided that they did it within the zone set
out by our forester.

So further than that, I... Does that
answer your question?

Ms. JILL GRANT: Yes, thank you.
Mr. PAUL BUXTON: Okay.
Ms. JILL GRANT: And can you just
clarify for us what the setback agreement is that you
showed us on the map?

Mr. PAUL BUXTON: There are actually two
setback agreements. One is for a house, and
unfortunately the house lot is so small that it scarcely
shows up, but it’s actually on the intersection of the
Whites Cove Road and Highway 217.

I think that you’re referring to the
larger parcel of land. That large parcel of land is
owned by the same people that own the quarry property.
As part of the negotiation for a lease, we wanted to
ensure that houses were not built along the Highway 217,
and that again could be in any way affected by the
quarry property.

So we have a setback agreement with
them so that essentially anybody purchasing that
property in the future would clearly have on their deed
this setback arrangement, and they could not come back
later and say: We did not know it was there.

Mr. GUNTER MUECKE: Mr. Buxton, if
Bilcon intends to use what's called the buffer zone,
okay, purely for the purpose of separating itself from
neighbours as you have just so outlined, and not for
extension of the quarry, which you also just stated,
what would be Bilcon's position regarding putting that
land under stewardship by an organization such as the
Canadian Nature Trust?

Mr. PAUL BUXTON: I'm not sure that I
can answer that question off the top of my head.
Certainly if any organization wants to make an approach
to us, I certainly think we would give it a lot of
consideration.

Mr. GUNTER MUECKE: Thank you.

Mr. GUNTER MUECKE: Okay. Let's then
move on to the existing Whites Cove Road. Could you
update us on the status of the road with respect to
usage by Bilcon and any negotiations with the Nova
Scotia Department of Transport?

Mr. PAUL BUXTON: I'm sorry, I missed
the two words, the existing rights-of-way did you say or
the road, the existing road, the Whites Cove Road?
Mr. GUNTER MUECKE: Yes.

Mr. PAUL BUXTON: The Whites Cove Road, my understanding is it’s an abandoned road, so the Department of Transportation, Public Works Provincial, does not maintain the road and has not maintained the Road.

We I think have a primary option, which is to use the Whites Cove Road, for access to the quarry site.

If that were the case, because it’s still a provincial road, then it will run through the site to the Bay of Fundy and access the Bay of Fundy, in which case we would fence off the road for safety reasons and it would just simply be as it is today.

The second option for us is to create a new access road, perhaps with better grade on it, for access to the quarry property. The Whites Cove Road then would simply remain as it is.

If we use the Whites Cove Road for access to the quarry property, we have said that we would need to widen the road and pave the road to keep down dust on the neighbouring properties, and of course that would have to be done in accordance with the guidelines set up by the Department of Transportation of Public Works, and at our expense.
Mr. GUNTHER MUECKE: Coming back to part of my original question, what is the state of... Is Bilcon negotiating with the Nova Scotia Department of Transport on this matter?

Mr. PAUL BUXTON: Not at this time, no.

Mr. GUNTHER MUECKE: And if it remains provincial property, how will it affect the viability of the quarry operations?

What you’re dealing with is basically two separate entities separated by what will in the future become a pedestal on which the road sits.

Mr. PAUL BUXTON: Well, it would certainly be an impediment, there’s no question about that, and certainly as you know, we did make application to acquire the Whites Cove Road, and it was denied by the Department of Public Works, Transportation and Public Works.

If that situation stays as it is, then of course we will live with it and we have designed around it, and we feel that we can accommodate it.

One of the biggest problems that we have at the present time with the Whites Cove Road is that the surface material is eroding and has been eroding certainly since we have had any contact with the site, and all those eroded materials are going down onto
the beach and into the Bay of Fundy.

We have in fact used our own men and
equipment and materials to try to correct that situation
because we are led to believe that there’s nothing in
the maintenance budget for the Department of
Transportation to do anything about it.

It is difficult to do anything about
that water without using a portion of the quarry
property. We have allowed the Department of
Transportation to dig trenches into our property to
divot some of the storm water which currently goes down
Whites Cove Road and is producing a significant amount
of eroded materials onto the beach and into the Bay of
Fundy.

We would certainly like that situation
to be solved one way or the other. If we own the road,
then we would be responsible and clearly we would be
prepared to pay for it.

If we do not own the road, then I don’t
think that we want to have the Department of Fisheries
and Oceans down every two weeks saying that it’s
material from the quarry site. And this has happened in
the past.

So certainly, we do need to deal with
the issue of the Whites Cove Road with the Department of
Transportation and Public Works.

We can live with it, it would be an impediment, but certainly the question of erosion off the road is going to have to be dealt with.

THE CHAIRPERSON: Mr. Buxton, the proposal you have to leave the road on a pedestal and dividing the quarry in half, is it your assumption that the road would continue to be owned by the Province and that individuals could enter one end, walk down the road between the two fences high above the quarry, end up on the beach and walk along the beach?

Mr. PAUL BUXTON: Yes, that would be the intent.

THE CHAIRPERSON: Well, would that not be... Wouldn’t your insurance and others get incredibly nervous about that in the sense that you have got heavy equipment, big ships, lots of activity, blasting, and then you have got people wandering down to have a picnic?

Mr. PAUL BUXTON: Well, they would not be able to access the quarry site. The Whites Cove Road stops short... It does not go all the way through the site, it turns the corner at the bottom if you would like, and goes partway along the beach, and then stops, and that area would be fenced off.
They would still be able to get access to the beach, but to no part of the quarry property.

THE CHAIRPERSON: Where I live, when they do blasting, they either cover it with mats or they move everybody out of the way, so people walking down that road on a blasting day, I mean what would you do?

I presume you would have to police the road, but then that would not be your responsibility, right?

Mr. PAUL BUXTON: Yes, essentially when a blast takes place, there would be a patrol if you would like at the top of the road to prevent people going down. This is rather like when blasting takes place along Highway 101. The traffic is stopped, the blast goes off, the road is cleared, and then the road is opened again.

And yes, we would have to make arrangements for temporarily clearing the area or notifying people to ensure that there is no one down there at the time of the blast.

THE CHAIRPERSON: I mean, the interspersing of the general public on an industrial site like that so closely together, it looks like it’s fraught with difficulties, but okay.

Mr. PAUL BUXTON: I think I will comment
on that. Certainly, we have seen the odd person walk
down there over the past five years. I think our
traditional knowledge interviews showed that the use of
the site is certainly considerably less than it was
let’s say 40 or 50 years ago.

Certainly, it’s a four-wheeler route.
They use that for access to a beach pathway, which goes
a considerable distance.

But certainly since we have been on the
site, it’s not widely used. I don’t think you would see
30 or 40 people down there in the course of the year.

Mr. GUNTER MUECKE: Okay. I think we
will move on to the construction phase of the project,
and during the construction phase it is proposed to have
the rock that is generated be the platform construction
for the plant for instance, and excavation of the
sediment ponds.

That in turn becomes stockpiled, and
you have provided us with calculations of the amount of
volume, the volume that this has generated and that it
would require through stockpiles, am I correct in that?

Mr. PAUL BUXTON: Yes, it’s certainly I
don’t think possible to get it all on our primary
stockpile at the bottom. Some of it will have to go up
on top of the hill into one of the bermed areas.
Mr. GUNTER MUECKE: Okay. So prior to putting the material into the bermed area, will that area have to be levelled?

Mr. PAUL BUXTON: Yes, I think we did make clear that both bermed areas, the sediment disposal area and the organic disposal area, would be levelled, because we don’t want any possibility of this material slumping and putting pressure on the front berms. So they will be, generally speaking, levelled areas.

Mr. GUNTER MUECKE: Okay. If they are levelled areas, that means removing basalt, right? And my question is that involves blasting, and according to regulations, you have to be 800 metres from the nearest residence and the area that you’re talking about now, at least from the latest map that we have, which is map number two, it shows the 800-metre setback and these areas...

The second stockpiled area, the bermed area, falls within that 800-metre limit. Could you explain to me how this can be accomplished?

Mr. PAUL BUXTON: Yes. I think you would get, and I believe the panel has visited the site, and as you approach the site from where the planned maintenance area is, there is what would appear to be, without taking level shots on it, a fairly significant
and large level area.

It’s in fact not quite levelled, but it
is a significant area and in fact, it then raises up a
little bit. There’s almost a natural dyke there on the
north side already in place.

There are two ways that you can level
ground. One is that you can remove material from one
end and level it in that manner, by blasting as you have
suggested.

The other method is of course to fill
the other end, and one thing that we have in over
abundance since the beginning of the quarry project is
rock, is blasted rock from the process area.

So I don’t believe that it would take
very much to level the area that we’re contemplating for
the storage of this rock, and if in fact we cannot find
a piece of levelled ground large enough, then we will
level it with the rock that we are bringing up from
below, and in fact create a level ground by filling with
course rock rather than blasting at the other end.

Mr. GUNTER MUECKE: But that seems to
contradict what you said earlier that the
stockpile...that you cannot have a stockpile on sloping
ground.

If you are filling, it’s the same as
stockpiling, you’re just increasing the depths of the pile. I have a bit of a difficulty with that.

Mr. PAUL BUXTON: Well, I think there’s a very significant difference in talking about something on the overburden material, which is a till material, and talking about something of a carefully prepared fill with coarse crushed rock material.

I would not contemplate any difficulty whatsoever in establishing a safe environment.

Mr. GUNTER MUECKE: Getting back to the stockpile that you propose in the area of what is the future sediment pond six I believe.

In your proposal, the material would be piled to a height of 40 metres. I find it hard to visualize how one can produce a rock pile with those dimensions.

Mr. PAUL BUXTON: Well, I will point out, perhaps as some sort of comparison, the stockpile of crush material that we showed you this morning in the conceptual plans.

The base of that is at a 10-metre level. The platform itself, the process platform is at 30 metres, so we have 20 metres below the platform and we will undoubtedly have 20 metres above the platform, so this is fairly standard. And that is for fairly fine
crushed material.

What we’re talking about in the area of sediment pond number five is in fact coarse crushed rock as it comes off the blast, and this can stand at a very significant angle.

Mr. GUNTER MUECKE: I’m being simplistic here, but I mean how do you get the stuff on top of the pile?

Mr. PAUL BUXTON: You get it on top of the pile either with loaders or later on with a bulldozer.

Mr. GUNTER MUECKE: You’re on level ground and you’re piling, your loader does not get up to 40 metres. Do you have to have some sort of ramp?

Mr. PAUL BUXTON: Oh yes. Yes. It would go up a ramp and be pushed off the end, yes. All three sides, until you created a pile.

Mr. GUNTER MUECKE: The second storage area, it’s... The elevation... If you take the elevation of that location and add 40 metres, how does the height then compare to the crust of the other location?

Mr. PAUL BUXTON: I don’t think that we suggested that if we take the material higher up, that we would need to go 40 metres. The intent is to put as
much material as we can where settlement pond five is
because it is considerably closer to the crushe
operations.

However, on top of the hill, we have a
significant amount of area which is simply not going to
be used for a significant period of time except for the
storage of organic materials, so we simply would not
need to go very high at that point.

Ms. JILL GRANT: I might ask a couple of
questions about the marine terminal at this point. What
kinds of activities have to go on on the land part of a
site to construct a marine terminal?

Mr. PAUL BUXTON: I’m going to refer
this question to Carlos.

Mr. CARLOS JOHANSEN: Could I have that
question again please?

Ms. JILL GRANT: Can you tell me what
kinds of construction activities have to go on the land
part of the site to facilitate the construction of the
marine terminal?

Mr. CARLOS JOHANSEN: The answer to that
one is very little of any. A marine construction is
usually self-contained. It comes with cranes and barges
all afloat, and materials on the barges, and very...

The only thing I foresee of what you
might call marine construction which would take place
off the land would be the very first supports, to access
the trusts, and they would be built from the landside,
and actually that would be a very small activity. You
probably would not even notice it because it’s a very
humble structure. It’s just a couple of columns every
100 feet or so.

But in terms of activity on land, there
does not need to be any, unless somebody... But there
is no need for it at all.

The concrete will be pre-cast. These
things are very self-contained. Materials all come on
barges, so nothing would be... There’s no need to truck
anything on the site if that is what you were thinking
about.

Ms. JILL GRANT: Well, the question
comes because obviously the conveyor has to go over the
environment preservation zone, so the question is
related to whether there are construction activities
that might jeopardize the environmental preservation
zone, people going back and forth across it?

Mr. CARLOS JOHANSEN: Well, it would be
in everybody’s interest to reduce that amount of
traffic, if any, to the minimum.

You can launch a thrust from the water
so that you could cross it in the air. I’d have to look at the details as to the exact distances we have to cover, but I know that the last one we did, we launched about 600 feet of thrust to avoid a tidal area, which we had been asked not to work on, and we never as much as walked on it after we put in the columns, and the columns were put in at low tide with special dispensations from the Minister from the Department of Fisheries and Oceans, and we were asked to remove every rock that might be in the way, and then after put it all back.

So in fact, every rock was put back manually so no, there are ways of doing these things with very little impact, and these days after all it’s 2007, we don’t have a thousand people running around. It would be a very small labour force.

Ms. JILL GRANT: Thank you. And another question about the marine terminal and conveyor is about where the observation station is.

There was discussion about an observation station, but none of the journals indicate where that would be.

Mr. PAUL BUXTON: Perhaps I could handle that one. It will be pretty high up on the marine terminal. I don’t think that we can access... We don’t
have the projector up at the moment, but if you perhaps ask that question, if you would not mind, on Wednesday when we will again have it up, and I’m quite sure that the other questions with respect to observers, I’d be very pleased to show all our cross-section where we expect the observer to be. Would that be all right?

THE CHAIRPERSON: Are you referring to Monday or...

Mr. PAUL BUXTON: It’s actually Wednesday, it’s the marine. We have marine all day Wednesday and we will certainly be bringing up that cross-section again, and we will be discussing observation generally, and I think in some detail.

Ms. JILL GRANT: Okay. But I would like an undertaking that you are going to give us that detail at that time.

The other question that would be related to that is how the observer gets there, to the observation station, along the terminals. Perhaps you will have those details at that time too?

Mr. PAUL BUXTON: Yes, we will deal with that issue at the same time.

Mr. GUNTER MUECKE: Okay. I would like to come back to the 800-metre setback from residences, in terms of blasting.
We were provided the property map and the 800-metre setback that is shown on that is still valid?

Mr. PAUL BUXTON: I wonder whether you could... Map number what?

Mr. GUNTER MUECKE: Number two.

Mr. PAUL BUXTON: Okay.

Mr. GUNTER MUECKE: It shows... It’s called: AProperty map, and it shows the 800-metre setback.

Mr. PAUL BUXTON: Yes.

Mr. GUNTER MUECKE: Is that line valid?

Mr. PAUL BUXTON: It is not quite valid at the present time and the reason for that is that property number 14... Can you locate property number 14? It is just off to the right-hand side of the Whites Cove Road.

Mr. GUNTER MUECKE: Yes.

Mr. PAUL BUXTON: And if you were to look at the three arcs if you would like which are shown, the middle arc there was a distance from property number 14.

Mr. GUNTER MUECKE: Correct.

Mr. PAUL BUXTON: And property number 14 is now in the ownership of Bilcon. I would also refer
you to the left-hand arc where we have one setback
agreement and the purchase of a number of properties, 2
and 3 and so on, and that left-hand arc would need to be
modified somewhat.
The right-hand arc stays where it is.
Does that help?

Mr. GUNTER MUECKE: Yes.

Mr. PAUL BUXTON: The centre arc is no
longer correct because we own property number 14.

Mr. GUNTER MUECKE: I understand. Would
it be possible before the end of the session to have a
modified map?

Mr. PAUL BUXTON: Yes, we can do that.

Mr. GUNTER MUECKE: Because the central
question on my mind here is if Bilcon is not able to
obtain permissions from the remaining property owners, a
substantial portion of your property holding, a
substantial portion of the resource would not be
accessible to you, and my question then is if that state
persists, will the quarry be viable?

Mr. PAUL BUXTON: We believe so. Yes,
if setback agreements or the acquisition of properties
did not take place prior to contemplating construction
date, we would continue with the Project.

Mr. GUNTER MUECKE: Could you provide us

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the volume of the material that would need... If the present boundary does not change, how much volume you would lose relative to the amount that would be still be minable?

Mr. PAUL BUXTON: I think we could produce that before the end of the hearings, yes.

Mr. GUNTER MUECKE: Okay.

THE CHAIRPERSON: Mr. Buxton, could you give us a date? We're going to consider that an undertaking for you, but we need to pin it down. Do you have any reasonable idea of when we could get that?

Mr. PAUL BUXTON: I think that by virtue of the fact that most of us, most of our experts will be here much of next week, I would appreciate that being the second week.

THE CHAIRPERSON: Early in the week, later in the week?

Mr. PAUL BUXTON: If we could have it... We do appear on Monday, so if we could do that on Wednesday of the second week?

THE CHAIRPERSON: Okay.

Mr. PAUL BUXTON: Thank you.

THE CHAIRPERSON: Thank you.

Mr. GUNTER MUECKE: Okay. If we could go on from the construction phase to the actual
operational phase now.

Mr. PAUL BUXTON: Yes.

Mr. GUNTER MUECKE: One of the limitations of the land operation that has been identified and that you have outlined in your proposal is that since the contact between the upper flow unit and the middle flow unit probably constitutes the main aquifer on the property, that that contact will not be breached, that is to say that a cap of upper flow material will always remain on the middle flow, is that correct?

Mr. PAUL BUXTON: Yes. And that is in there for two reasons. One is that we certainly believe that the major flow of water lies at the boundary of the middle flow unit and the upper flow unit, and I think we will be certainly dealing with that next Friday under the day on hydrogeology.

There’s a second reason for that, and that is that the quality of rock in the middle flow unit is poor. It is very poor rock, and remembering that we have to adhere to very strict specifications for the quality of rock which is exported; it would be very detrimental to our operation if we broke into the middle flow unit and got that material contaminating the high-quality rock that we want to export.
So certainly, we do not want to go into the middle flow unit.

Mr. GUNTER MUECKE: So understanding those reasons, my question is how you can avoid breaching that contact because how well can that contact be defined?

After all, you do not see that contact on the property. It is hidden by the upper flow. How well have you defined this contact? Because in order not to breach it, you will have to know where it is, is that right?

Mr. PAUL BUXTON: Yes. You’re quite right in saying that there is no contact between the two flow units on the property, but there is contact between the two flow units just east of the topographic division, and in fact that line of demarcation is very easy to see and we have mapped it and surveyed it.

Now certainly I can’t, but professional geologists can, and the mapping was done with the assistance of the Department of Natural Resources (Provincial), so we do know where it is.

There is in fact... When I’m shown it, there is in fact a very significant difference in the qualities of the rock.

However, when this rock in the upper
flow unit is being obtained, we will be drilling holes
into the rock in order to blast, and we will be able to
tell when or if we have penetrated the middle flow unit,
where we don’t want to be.

We have at the moment four bore holes
on the site, and we have six monitoring wells which were
drilled in the area. So it is not as if we don’t know
where it is in general terms.

We certainly don’t know within three or
four feet, but we do know where it is in general terms,
and we will carry out additional bore holes on the site
to further delineate where it is so that we’re not over
blasting, so that we don’t get contaminated rock in our
process operation.

Mr. GUNTER MUECKE: Okay. In terms of
the present existing data that you have, it is only...
And you can correct me there, I think it’s two wells,
okay, that you have drilled and which you can actually
pinpoint the contact, so it’s very limited data at the
moment.

There has been work done on the upper
flow/middle flow contact at Phinney’s Cove, which is
about 40 kilometres from here, and it has been shown
that the topography of that contact is at up to 7 metres
on a 300-metre distance, so it is not a flat sheet of
basalt necessarily, it can have considerable
topography.

So my question is when you drill into
this considerable topography, how will the drillers know
that they have penetrated the contact?

Mr. PAUL BUXTON: I can’t speak for the
drillers. They generally are very well aware of the
geology in the area. They drill wells there all the
time.

We would not rely on a driller; in fact
we intend to do our own drilling on site. In fact, we
would have professionals on-site to do this kind of
delineation before we went very far in the process.

As I say, it’s a very significant issue
to us if we got into the middle flow unit, because of
the contamination of the high-quality rock that we want
to get out.

So this is certainly something that we
would be doing ourselves with professionals on-site,
delineating precisely where it is.

Mr. GUNTER MUECKE: What sort of
drilling are you proposing here, are these core?

Mr. PAUL BUXTON: It would be core
drilling, yes.

Mr. GUNTER MUECKE: And for the
blasting, you do not do core drilling, do you?

Mr. PAUL BUXTON: No, but we would do
this kind of core drilling on the site to delineate
precisely where this product is. We can’t afford, as I
have said, to get middle flow unit material.

The upper flow unit is in some areas,
we can’t say for certain all over the site, but perhaps
the bottom five to ten metres of the upper flow unit is
fractured, and fairly significantly fractured.

That gives us a good idea when you’re
drilling that you’re suddenly getting into a different
kind of formation. So there is a forewarning before we
get into the middle flow unit.

Mr. GUNTER MUECKE: If that forewarning
does not provide the information and you accidentally
blast and expose the middle flow unit, what remedial
action do you have in mind?

Mr. PAUL BUXTON: I think that this is
an issue perhaps we will deal with more thoroughly next
Friday, but I will answer it I think partially today.

We do not see the exposure of the
middle flow unit as a particularly negative activity.
We don’t want to do it, and we also believe that the
major groundwater flow lies very close to that boundary,
and we do not want to interfere with the groundwater.
So I would say that we would take great care that we in fact do not for a number of reasons, but if we inadvertently did, I don’t see that... And our hydrogeologists do not see that as a major issue with respect to the flow of water.

The groundwater recharges on the other side of the mountain, on the east side. We are now blasting on the west side of the mountain.

Essentially, from the contact to the middle flow unit and the upper flow unit and possibly all the way back to the contact of the middle flow unit with the lower flow unit, the flow of water is towards the Bay of Fundy, so simply impacting a small area of middle flow unit would have no effect really whatsoever on the ground water geology in that area.

Mr. GUNTER MUECKE: And like you said, we will probably discuss that during the hydrogeology section. And I guess you just said that through core drilling, you will be delineating the nature of the contact and the topography on it.

I think an interesting exercise would be, and maybe you could provide us with that information, but would be using the topography that is found at Phinney Mountain Creek of seven metres over a distance of 300 metres, one could sit down and look at
the property and say: AHow many cohort holes will it
need to define the contact? B

Because seven metres to 300 metres and
taking the dimensions of the quarry means that you will
have to drill a very substantial number of cohort holes
in order to delineate the contact, and it should be
possible to calculate how many will actually be
required, and I would be very interested to hear what
those numbers are.

Mr. PAUL BUXTON: Yes, I would observe
that the quarrying will take place over a 50-year so one
would not go... We would not go on-site in the first
couple of years and contemplate identifying everything
on the entire site.

We do know from bore holes or
monitoring well holes 2 and 3 and bore hole number one,
we know where the contact is in those.

You’re right, we don’t know where it is
over every part of the site, but we know that we have
very substantial depths of overflow units in that area,
and certainly the prospect of us getting the sufficient
quantity of rock from the site by worrying about whether
we are 1 metre or 2 metres from the middle flow unit I
don’t think is really a significant issue, but I will
certain see if one of our geologists can come up with
that kind of number.

Mr. GUNTER MUECKE: We are not looking
at how many bore holes total, but basically what sort of
spacing would you need in order to define a seven metre
topography over 300 metres.

Ms. JILL GRANT: I have a question about
the disposal areas, the rock storage and so on, and one
of the parts to the information request indicated that
if you need to ship rip rap, you would use a portable
crushing or cruising plant.

I’m presuming that that would be
enclosed, but perhaps you could tell us a little bit
more about it. There was not much detail provided.

Mr. PAUL BUXTON: Yes, I don’t think
it’s really any possibility at all. I don’t believe
that we would give that much of a possibility.

There is sufficient storage on-site,
it’s much more convenient for us to have it. It was an
option that there be a demand for rip rap somewhere and
that we could get it off the site without having to
store it and then bring it back down again, but the odds
on that happening I think are very remote.

And you’re right, to bring in a
temporary crusher and doing all the enclosures and all
that sort of thing I don’t think would be very much a

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worthy effort, unless it were absolutely vital that we did that.

Ms. JILL GRANT: I will ask another question about construction activities on the site. What kinds of risks are likely to occur from the construction activities to the environmental preservation zones and how do you propose to manage those activities?

Mr. PAUL BUXTON: We don’t anticipate any activity in those areas. There is one potential area that we will have to be particularly careful with, and you have already raised that issue with us, and that is where the ship loader crosses the environmental preservation zone as it goes out towards the marine terminal.

The piles are about 100 feet apart, so we will need to be careful that we don’t interfere with the environmental preservation zone in that area.

Other than that, they will be set aside on day one and we would not contemplate going into those preservation zones at all except perhaps to do something in the nature of woodwork, as advised by a forester, a professional forester.

Mr. GUNTER MUECKE: Since you have just touched on the environmental preservation zone, in
places in the Environmental Impact Statement, a
ccontainment berm is mentioned, and I haven’t been able
to locate it on any of the maps and one of my questions
is where will it be, what will be its extent and will
that encroach into the environmental protection zone?

Mr. PAUL BUXTON: There are a number of
containment berms. For example, I would call... The
berms around the sediment retention ponds would be
containment berms.

There will be containment berms around
the organic sediment storage area, around the organic
and sediment storage areas. So there will be a
significant amount of containment berms. That is not
contemplated to be in the preservation zone.

Mr. GUNTER MUECKE: Maybe I was
misreading it, but I got the impression that in addition
to the berms around the sediment ponds, that there would
be additional protection by a containment berm.

That is the impression I got in the
section on accidents and malfunctions. I got the wrong
impression?

Mr. PAUL BUXTON: No, you did not. It
is part of the containment berm system for the organic
and the sediment control areas. So we have the actual
containment area, which will have a berm around it.
Further down the slope, there will be another containment berm, and I suspect that that’s what you’re referring to.

Mr. GUNTER MUECKE: Okay. That makes it a bit clearer. And the same is true for the sediment ponds, the six sediment ponds? They will have an additional containment berm?

Mr. PAUL BUXTON: No.

Mr. GUNTER MUECKE: No?

Mr. PAUL BUXTON: No, because essentially they contain water, and obviously we don’t have slip or slide or that kind of pressure from water, and they will be designed... The existing containment berms will be designed to contain the water pressure which is contemplated.

If the water level rises, then it will go into the next pond down rather than increase the pressure on the containment walls.

Mr. GUNTER MUECKE: In the sediment storage area, you propose to have two sediments I believe, and the fines from the washing operations will be pumped into these areas, and they will be used for reclamation and production and so on.

There seems to be no drainage provided for the sediment storage area, and given that in Nova
Scotia, precipitation exceeds evaporation, I am somewhat puzzled as to why it is no drainage is provided for those areas?

Mr. PAUL BUXTON: First of all, the berm around these areas will be on all those four sides, which means that the rainfall that comes into these containment areas will only arise from the area of the contained areas themselves.

They are not open banks. There will not be water from other parts of the watershed entering into these containment areas.

Secondly, the water content of the sludge if you like, which is pumped out, is quite high, but this material dries relatively quickly and surprisingly, one can drive a truck on this stuff in about two weeks.

Now to deal with the rainfall itself which falls actually inside these containment berms, we would anticipate that the front berm and part of the side berm, and maybe all of the side berm when we do the detailed design, would have as part of its core a barrier material which would trap any sediments that came out of these areas and would allow water to pass through, but that any sediment would be contained.

And the same thing would happen with

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the safety containment berm if you would like, so that
we get basically a double operation if you like with
barrier material.

Mr. GUNTER MUECKE: Perhaps we could
move on to the sediment ponds themselves and their
proposed depth of four metres.

Mr. PAUL BUXTON: Sorry?

Mr. GUNTER MUECKE: Perhaps we could go
on to the sediment ponds now and their proposed depths
of four metres.

Could you clarify to us how the four-
metre depths, given the runoff from the property that
these sediment ponds will have to handle, how these
structures can handle the 100-year 24-hour event,
precipitation even, how they handle the 100-year maximum
5-day event and how climate change considerations will
change the values that are necessary in terms of depths
in the sediment ponds to accommodate the extra water.

I guess what I would like to see is
maybe somebody who has the knowledge to basically put a
chart up for us to see what each component is and what
it adds up to.

Mr. PAUL BUXTON: I’m going to pass this
question over to David Strajt who carried out all this
work for us. How quickly we can get drawings up on the
screen, I’m not sure, but we could certainly start to
answer the question in a verbal sense and then look for
other information. Mr. Strajt?

Mr. DAVID STRAJT: So the sediment ponds
have... There’s a multiple use for the sediment ponds.
They need to treat the runoff to remove sediment.
Bilcon would also like to use the ponds for process
water make-up and as you mentioned, the ponds need to be
able to handle flood flows as well.

So we looked at the amount or the
volumes that are required for each of those purposes and
based on the proposed surface area for the ponds that
Bilcon has set aside, we could come up with a depth.

And so it is a balance, it is sort of a
competing use. I guess I can get into some numbers
first. We looked at average requirement during
operations, average requirements for supply, and that
came out to be 0.9 metres of depth would be required in
each pond, over each of the ponds.

For our 24-hour 100-year flood, runoff
from the entire catchment above the site came up to be
1.9 metres. So 1.9 and 0.9 is 2.8, so there was still
volume remaining in that situation.

We also looked at a five-day, 100-year
volume, again from the entire catchment above the ponds,
and that came out to be 2.8 metres of equivalent depth.

So again, 2.8 and 0.9 will give you

3.7, so you still have one foot, essentially one-foot

freeboard in that situation.

Mr. GUNTER MUECKE: Yeah, but what you

have just quoted us is based upon an average of 0.9

metres. That’s the year average required for the

operation.

However, because of seasonal

variations, that number has to be considerably larger at

times in order to get through the dry seasons and can be

smaller at other times, is that correct?

Mr. DAVID STRAJT: Well that number,

0.9, represents the cumulative sum over an average dry

season. You would need 0.9 metres of depth to get you

through an average dry season.

So normally, before the dry season

there is a surplus of water, but typically between June

or July through October, typically your dry season, so

cumulatively we add it up, the volume required over an

average dry season and 0.9 metres is what would get you

to the end of that dry season, and then come October or

November again...

So the 0.9 is cumulative. It’s not an

average requirement over the year, it’s the amount of
storage required to satisfy demand over that two or
three-month period.

Mr. GUNTER MUECKE: The figures you have
provided are for historic data, the 24-hour and the
five-day events. With climate change, we can expect
these numbers to increase. How does that change the
picture of this?

Mr. DAVID STRAIGHT: Again, there is a
trade off. You know, normally these 100-year and five-
day events are... You know, they are infrequent events,
they occur by definition once every 100 years, but the
risk of occurrence can be calculated as well, so you
might have a situation where you would have to...

You would not have as much available
for storage for a short amount of time, because you
would need to make room for an anticipated 100-year
storm or a five-day storm, so for a short period of
time, there might be a situation where your flood
storage will cut into your supply storage, and my
understanding is that for short periods of time, Bilcon
is prepared to not wash aggregate and ship unwashed
aggregate.

It's an inconvenience, but it's
something that Bilcon is prepared to do.

Mr. GUNTER MUECKE: So these unusual
events, there will have to be a release in order to be able to accommodate?

Mr. DAVID STRAJT: There may have to be a release depending on what time of year it is, what level the ponds are at. You know, worse case scenario, if the ponds are at maximum storage level and an anticipated 100-year storm is on its way, then there may need to be some draw down to make room for that storm.

Mr. GUNTER MUECKE: So can you give us in any of the worst case scenarios what amount of drawdown may be needed and which berms are involved?

Mr. DAVID STRAJT: I would have to do some number crunching. I could give you that... I don’t have it off-hand here, but I can provide that for you.

Mr. GUNTER MUECKE: So could we put that on the list? Okay. Somewhere along the line I picked up that the storage required at times will have to be two and a half metres and not 0.9 metres, and that two and a half metres was in the assessment report. What does that two and a half metres refer to, do you know?

Mr. DAVID STRAJT: Yeah. That two and a half, that would be a request to look at what the amount of storage would be in a drought situation, so we looked
at a drought year during the period of record, and so
during that worse case scenario, if you wanted to get
through a drought year, you would need 2.4 metres of
storage during that dry period.

Mr. GUNTER MUECKE: Okay. So what you
are saying is that if you’re looking at 4 metres, we can
accommodate for nine years. But if you encounter a
drought year, it would mean that not sufficient water
would be available, is that correct?

Mr. DAVID STRAJT: Well again, it
depends on how you operate your ponds. You can operate
them to have as much storage as you need. You can set
your outflow levels to contain as much water as you
anticipate that you need, and then lower it down if you
don’t anticipate you will need as much storage, so you
can...

It all comes down to how the outlet is
designed and how you operate and whether or not you
increase your source for a short period of time or not.

Mr. GUNTER MUECKE: Which brings us back
to worse case scenarios. If you have decided to use
maximum storage and you are hit by a storm, a 100-year
storm, then there’s a problem; and you are going to
provide us with some numbers on that.

Ms. JILL GRANT: In one of the
documents, I think you had indicated that a major storm
event could raise 5,000 to 10,000 gallons per minute, of
water, is that correct?

Mr. DAVID STRAJT: I believe Bilcon had
made some preliminary calculations on the leases.

Ms. JILL GRANT: One of the questions is
that just given that not many of us are very accurate at
predicting the weather for the summer ahead, and even
the farmers’ almanac is not always perfect, am I right
in presuming that Bilcon will need to always presume
that they will be heading into a drought, and therefore
keep the ponds at 2.5 metres?

Mr. PAUL BUXTON: I guess that’s an
operational question. I think that it is of significant
importance to us that we wash the rock. I think I have
made that clear.

It is not crucial to the extent that we
would close the operation, but it is a very important
part of the process, so we would want to generally
speaking ensure that we had sufficient wash water.

One of the points that I would like to
make here is that we do not see overflow from these
ponds as a major issue.

All the water from our watershed
currently goes out of the natural ground and into the
Bay of Fundy. We did background analysis of that water and typically the water from the natural watershed contains in the order of 14 mg per kilogram or 14 parts a million.

In the installation of the small settling pond that is there now and the settling ponds that will be there in the future, with good maintenance of those ponds, cleaning out the base and good maintenance procedures, we would not anticipate an overflow producing anymore than 2 or 3 parts per million.

And this was our experience over three years of testing of the existing settling pond. So in fact, the settling pond can act as a cleaning agent.

Remember that on this site, the vast amount of the fines are being taken out from the wash cycle and they are going out to the sediment retention ponds.

The fines that we’re talking about going into the ponds are the fines off the road and there are certainly some, that’s why the sediment ponds are there, but it is nothing like the volume that we will take out in the wash cycle.

And again, the first pond, pond number five, will have forebays in it, and the idea of the
forebays is to quicken the settlement of the sediment in
the first pond.

We would anticipate and we would want
that water to be essentially clean by the time it
reaches pond number one.

If we have an overflow situation, we do
not see this as a serious event. First of all, we see
very low levels in the water as it goes out. It will
then go out through the constructed wetland, and we will
carry out continuous monitoring of any outflows from the
system.

Frankly, I think we’re more concerned
about retaining enough water on the site than we are
about overflow situations.

Now that is not to say that just
because we say it’s a one in a 100 year storm that you
can’t get a 100-year storm on Monday and one on Tuesday,
it can happen, and we believe that we can handle that
situation.

And I would just like to comment here,
and I think we may make this comment further on in the
process.

But generally speaking, we have tried
to design with the parameters and thresholds which are
generally set out under the guidelines under the Pits

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Typically, one designs for a 100-year, 24-hour event. That is not to say that we cannot raise those berms to contain in any normal situation a 100-year, five-day maximum event. But that is not typically designed. And we would see no particular imperative on the site to design into that level.

We did consider that. We were asked to consider that and we did consider that and provided the information, but typically we would design for a 100-year and 24-hour event.

Ms. JILL GRANT: A couple of follow-up questions on the constructed wetland. In a situation where you’re storing water during the summer because your volume... I’m presuming there’s no water going into constructed wetland, is that the case?

Mr. PAUL BUXTON: Yes, that would typically be the case. Yes. And so the water level in the constructed wetland would vary.

Ms. JILL GRANT: And during the release of 5,000 to 10,000 gallons per minute, if that’s required to draw down quickly, what anticipated effect would there be on the constructed wetland handling that volume?

Mr. PAUL BUXTON: I think the assumption...
there is that we would in fact try to draw down
sufficient water in the sediment ponds for a 100-year,
five-day events. That may not necessarily be true.
And I think that we would, over time,
develop a fairly sophisticated approach to this kind of
situation.

As I said, if that water comes, if we
do get that sort of event when we’re at maximum
capacity, I think we will do somewhat of a balance, that
we would release some water from the ponds and some
water would just simply come through with a natural
storm event.

I don’t think that we meant to give the
impression that if a storm were forecast, that we would
attempt to pump out that quantity of water simply in
order to contain that storm event. We would see no
necessity in doing that.

Ms. JILL GRANT: You’re talking in your
assessment document about an outflow structure that
could be used to stop flow. I wonder if you could
explain what that is about and what would happen if you
did in fact stop the flow?

Mr. PAUL BUXTON: No, the outflow
structure is not in any way, shape or form to stop the
flow going out. The outflow structure is a constructed
concrete structure which enables us to do two things,
one is to measure the flow that is going out and
secondly, in order to take samples from precisely the
same place and precisely the same conditions so that are
samples means something from month to month.

Mr. GUNTER MUECKE: You’re talking about
a constructed wetland along the coast, and I guess I
find it difficult to visualize how you can have sudden
release rates of that magnitude, and 5,000 gallons per
minute has been mentioned in the report, and the
wetlands basically surviving this event.

Would it not result in... Having a
release rate of that magnitude, what does it mean in
terms of velocity of water flow through that wetland?

At the moment, we have cross-section of
the wetland, but no indication of dimensions, so it’s
hard to visualize what sort of flow rates would result
and what the possible effect of that rapid flow would be
on the wetland.

Mr. PAUL BUXTON: Well, I will pass the
question shortly back to Mr. Kern behind me who designed
the constructive wetland, but I want to make a couple of
points here.

In the calculation of the water
quantities coming down into the ponds, we have assumed

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the worst case scenario, i.e. that the ground is
saturated before a 100-year storm event starts, so in
other words we get a fairly instant flash off that is a
very significant proportion in measure.
Secondly, the ground as it is now, the
natural state of the site as it is now, handles that
runoff that comes down.
There is a natural wetland just to the
west of the existing sediment pond, and in extreme wet
weather now, that amount of water comes out of that
watershed and goes into the Bay of Fundy carrying a
fairly significant load.
The next thing I think to remember is
that this is not a totally open site. One of the
advantages of incremental reclamation and incremental
opening of the quarry is that we do not have the whole
quarry site open at the same time, so we have a fairly
small portion of the site opened at any one time.
Now any open area of the quarry
increases the runoff velocity, and there’s a fairly
well-known formula that one can calculate runoff and of
course the surface is of significance, whether the water
penetrates or whether it flashes off as in a parking
lot.
So yes, in some way, we will be
increasing it because some parts of the quarry will be opened. But the entire site is not opened so we’re not talking here of a totally open area with a very fast flash off as you would get in a parking lot for example.

So I think that we would try to maintain a balance. If we were at a fairly high level because we anticipated a drought and we also predicted a 100-year and 24-hour event or a five-day event, I think we would do two things really.

One, we would do some pumping down to increase the capacity and try to get a more stable flow when the flood arrived, but we would be content to contemplate some of the water going out after it has gone through the five ponds, and the wetland, and out into the Bay of Fundy as it does today.

And we would not see increasing the amount of material above the levels prescribed by the Nova Scotia Department of Environment and Labour; in fact we are not allowed to.

Mr. GUNTER MUECKE: And the effect on the wetlands?

Mr. PAUL BUXTON: Sorry, thank you for reminding me. Mr. Kern, would you comment please on the wetland, the constructed wetland?
Mr. DAVID KERN: The discharge of a major storm event is on a very infrequent basis. The length of the constructed wetland is approximately 500 metres. It has check dams similar to a highway road ditch or that a Highway 101 road ditch would have within the constructed wetland, it’s a part of it.

It would vary in width and depth, and I believe that question was answered in our revised project description, verbally, in some detail.

Mr. GUNTER MUECKE: Any ideas of... I mean, what sort of velocities are we talking about? I mean, you can have check dams and everything, but if you are releasing large amounts of water, the cross-section areas of wetland is of importance in determining velocities.

What are the dimensions? We have never seen any actual numbers.

Mr. DAVID KERN: The length is 500 metres. The side slopes are... The side slopes vary from 1.5 horizontal to 1 vertical, to 4 horizontal to 1 vertical, so this isn’t...

It isn’t intended to be a constructed channel. It’s intended to create different depths, widths, shallow water, deep water, ponding water for habitat enhancement purposes, and we have done no
estimate of velocities going through the constructed
wetland.

Ms. JILL GRANT: In terms of the
sediment retention, my understanding is that pond five
will not be in operation until after the first five
years, is that correct?

Mr. PAUL BUXTON: No, not quite, but it
will be constructed immediately. The product which is
on that site is crushed, so it will be a priority to
construct, but we will have to remove that material
first and then that pond will immediately go into being.
It will be constructed.

I can’t say whether that will be the
second year, but that would be my... That would be my
guess.

Ms. JILL GRANT: So during that time
when that is not in operation, there won’t be a sediment
forebay to try to trap sediment, is that correct? So
the first several years of operations, the sediments
will be going in the other ponds?

Mr. PAUL BUXTON: Not necessarily.
Sediment forebays are very easy to construct. They are
not elaborate things. They’re a bit like a wheel which
one puts across the sediment pond, and one could easily
be put across sediment pond number four.
Ms. JILL GRANT: And can you give us some indication of what proportion of the sediments are likely to fall out in the forebay when this forebay is constructed?

Mr. PAUL BUXTON: I would certainly hope that we would retain at least 90 per cent of the sediments in the forebay. That would certainly be the intent, because we have the opportunity to easily clean it out there, and take it into proper storage. So the less that goes into the other ponds, the better, and we would certainly try for that kind of percentage.

Ms. JILL GRANT: Okay. Thank you. And I am curious about when the fines are going to be removed from the ponds because in different documents, different things are said.

In one of the documents, in section 9.2.1, page 43, it says they will be removed in winter when there is low biological productivity in the pond. In another document though, it says they are going to be removed during the dry season. So I’m curious about that because it seems that that would be the time when storage of water is important, so I’m not sure that that implies the level of that pond would actually be lower.

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And then in other places, it says the sediments will be removed four times a year to maintain capacity; that’s in the supplement to the I.R.

So can you please clarify for us when the sediments are going to be removed?

Mr. PAUL BUXTON: Yes. I think one of the confusion that was created, and it was entirely our fault, was that we tried to make a descriptive perhaps analysis of the capacity of the ponds, and what we assumed was that the sediment would be contained equally in all the ponds.

We thought that this would make a good visual image over the course of a season, and so we described the sediment ponds with a layer of sediment across the bottom so that it would be somewhat easier to calculate the capacity of the tons in these storm events, and unfortunately I think that that not a very good idea because I think it created some confusion.

It is not the intent to let the sediment accumulate in all the ponds, and that’s why we have this forebay. I think that the answer to your question is really an operational one. It would really depend on what was going on in the quarry at a particular time.

If we’re under construction, if we’re
doing something new, opening up new areas, then I would
expect a higher accumulation of sediment, and we would
have to then clear the forebay on a more frequent
basis.

Once we got into a productive mode and
we were not stripping top soil for example, the area was
relatively clean, then the cleaning of the forebay would
be more infrequent.

I think the intent was to indicate that
we would clear the forebay obviously when it is required
and so that if we had a flood condition, less material
might be lost, but also with some sensitivity to the
seasons and to what is going on biologically in the
area.

Ms. JILL GRANT: And what effect will
clearing out the sediments from the ponds have on the
habitat capacity, the habitat that is trying to create
in the ponds?

Mr. PAUL BUXTON: I would say very
little, because it will be fairly short-lived. There
will be some turbidity in the water, clearly when this
is being taken out.

One of the things about basalt rock is
that it is at the high specific gravity, and its
particulate matter is quite dense and settles out
relatively quickly so that perhaps there would be some disturbance over a short period of time, but we don’t think that it would have any significant effect as you say on the habitat that is probably trying to establish itself, even while we’re using the ponds.

THE CHAIRPERSON: Okay. We have come to the end of this particular topic, and the original stated closing time for today would be 4:30. It is 4:25, so we will avail ourselves of the break in the subject matter and break for today.

We will see you all again on Monday morning, 9:00.

Mr. PAUL BUXTON: Thank you.

--- Whereupon the matter was adjourned at 4:25 p.m. to resume on Monday, June 18, 2007, at 9:00 a.m.