PUBLIC PRESENTATION AND VERBATIM REPORT ON EIA FINDINGS

Proposed Coral Springs Residential Development

September 27, 2012

National Environment and Planning Agency
10 Caledonia Avenue
Kingston 5

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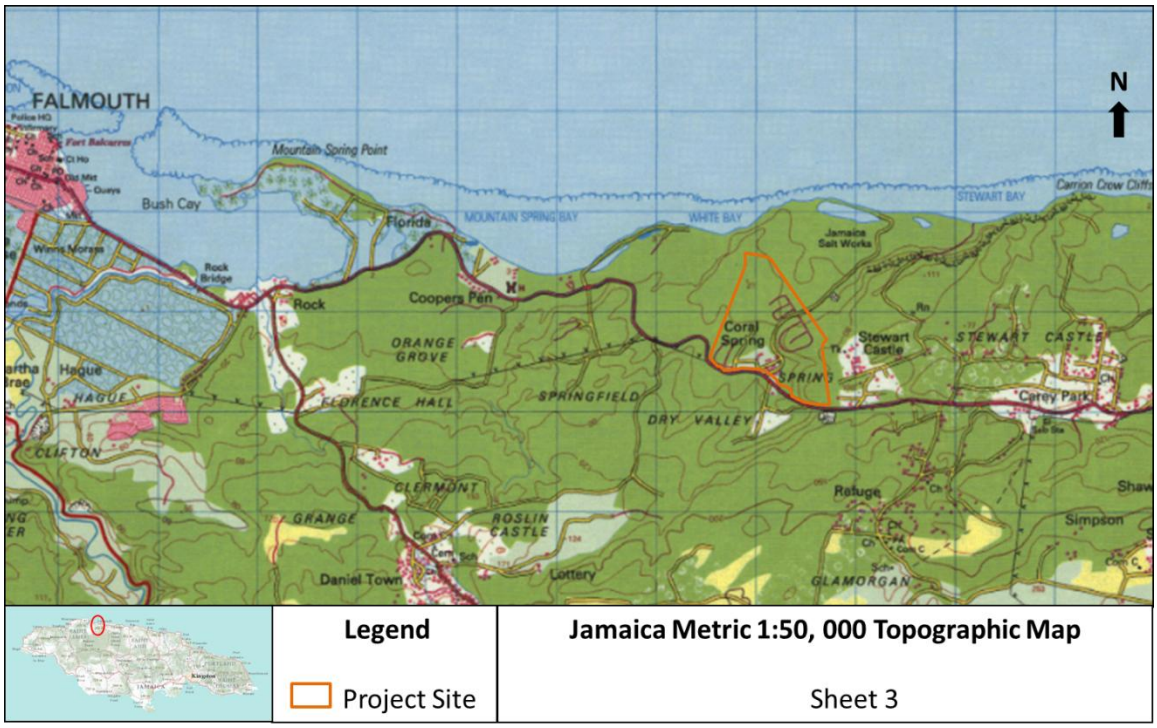
1.0 INTRODUCTION

Gore Developments Ltd has expressed a desire to establish a residential housing development at Coral Springs, Trelawny. The land is represented by the orange polygon in the image below.



In 2008 Gore Developments Limited (GDL) purchased 169 acres (68 ha) of land in the Coral Springs property in the parish of Trelawny from the Redevelopment Foundation. The project site is separated from the southern Dry Valley property by the North Coast Highway. The coastal property of White borders Coral Springs to the north. Both the eastern and western boundaries of the project site encompass forested private property.

The subject property was originally subdivided in 1964 and was slated for a 380 lot housing development, each of a minimum of 700 m^2 (8,000 ft^2). However the majority of the property was never developed. A total of 39 landowners were able to legally obtain property titles for their lots which most have now completed building while the others are empty lots. The remainder of the property was taken over by the Redevelopment Foundation.

GDL proposes to establish a residential development of 543 units in the Dry Limestone Forests surrounding the existing housing estate at Coral Springs. Of the 543 residential lots, 401 lots will be built by GDL to feature a single family, detached two bedroom dwelling in the flatter lands on the west and north. The remaining 142 lots will be service lots to be developed by each lot owner and are located on the two major hills on the eastern section of the property. The steep escarpment of these two hills will not be disturbed but retained in their natural state. Lands have

been allocated in the development plan for a Basic School, Commercial Centre including a gas station, sewage treatment facility, recreational area and natural green areas.

2.0 NEPA REQUIREMENTS

The Public Consultation was staged in accordance with the NEPA Guidelines for Public Consultations.

3.0 PUBLIC NOTIFICATION

As per NEPA Guidelines for Public Consultations, the first public notice was published at least three weeks before the scheduled date of the meeting. Three notices were published in the Gleaner as follows:

1) Sunday August 19
2) Wednesday September 12
3) Sunday September 16

The first notice is shown below. In addition to the media notifications, letters of invitation were sent out to the appropriate agencies, NGOs, elected representatives and community members. Flyers were distributed in Coral Springs and surrounding communities.

NOTIFICATION OF PUBLIC MEETING FOR CORAL SPRINGS RESIDENTIAL DEVELOPMENT, TRELAWNY

There will be a public presentation on the Environmental Impact Assessment Report

Venue: Kettering Baptist Church
Date: September 18, 2012
Time: 5:30 Pm - 8:30 Pm

The public is invited to participate in the presentation by way of asking questions relating to the proposed project.

A copy of the Environmental Impact Assessment Report may be consulted at:

- Trelawny Parish Library, Rodney Street, Box 44, Falmouth P.O., Trelawny 9:00 a.m. to 6:00 p.m, Mondays to Fridays and 10:00 a.m. to 5:00 p.m. Saturdays
- Trelawny Parish Council Office, Water Square, Falmouth 9:00 a.m. to 4:00 p.m., Mondays to Fridays
- Gore Developments Ltd., 2c Braemar Avenue, Kingston 10, 9:00 a.m. to 4:00 p.m., Mondays to Fridays
- Environmental Solutions Ltd., 89 Hope Road, Kingston 6, 9:00 a.m. to 4:00 p.m. Mondays to Fridays
- NEPA Documentation Centre, 11 Caledonia Ave., Kingston 5, 9:00 a.m. to 4:00 p.m., Mondays to Fridays
- The NEPA Web Site at **www.nepa.gov.jm**

For further information please contact:
The offices of the
National Environment and Planning Agency
10 Caledonia Ave.
Kingston 5
Telephone: 754-7540-42
Or their website: www.nepa.gov.jm

List of Invited Guests

Organization	Name and Position	Tel Contacts	Fax #
Boating & Bird shooting Enthusiasts	David Muschett Roger Newman Patrick Hastings		
Falmouth Fire Brigade	Michael Tomlinson Fire Prevention Dept.	954-3230	617-0093
Fishermen's Inn	Jean Lewis Manager	954-3427	954-4078
Glistening Waters	Mrs. Rose Bernard Manager	954-3326	617-4625
JCF Traffic Department	Sgt Bewry Head	617-5295	
JCF Falmouth Division	Superintendent A. Lewis, Head	617-5004	954-3222
Member of Parliament	Patrick Anderson		954-3339
Mayor of Falmouth	Garth Wilkinson		
National Water Commission Main Treatment Plant	Mr. Orville Williams. Zone Team Leader	610-5802	610-5891
Outameni Experience	Donavon Haughton Manager	954-4035	954-4036
Parish Counselor for Falmouth	Garth Wilkinson	842-9100.	954-5592
Pebbles FDR	Freddie Depass General Manager	617-2078	617-2500
Rock Fishing Beach	Hubert Mowatt & Albert Thomas Senior Fishermen	Rock PA	
Trelawny Health Department	Elsa Sommerville Chief Public Health Inspector Delroy Mowatt Deputy	954-3689	954-3563
William Knibb High School	Dr. Mark Nicely Principal	610-5644	610-5577
Kemtex Development and Construction Ltd (Stonebrook Estate)	Mr. Sylvester Tulloch Managing Director	Tel: 975-4576	975-4794
ODPEM	Mr. Ronald Jackson Director General	928-5111	
NEPA	Mr. Peter Knight Chief Executive Officer	754-7540	
Ministry of Agriculture	Mr. Donovan Stanberry	927-1731	

Organization	Name and Position	Tel Contacts	Fax #
PIOJ	Dr. Wesley Hughes	960-9339	
WRA	Mr. Basil Fernandez	927-0077	
National Irrigation Commission	Mr. Douglas Walker	977-4022	
Jamaica Developers Association Ltd.	Mr. Reynald Scott	967-2503	
Ministry of Health	Mr. Williams Broughton	967-1977	
NROCC	Mr. Ivan Anderson	929-1581	
NWC	Mr. Albert Gordon	929-5430	
JPS	Mrs. Kelly Tomblin	926-3190	
CCAM	Ms. Ingrid Parchment	986-3327	
LIME	Mr. Garfield Sinclair	926-9700	
Jamaica National Heritage Trust	Mrs. Laleta Davis Mattis	922-1287-8	
Jamaica Trade & Invest	Mrs. Sancia Bennett-Templer. President	978-7755	
Forestry Department	Mrs. Marilyn Headley Conservator of Forests	927-1731-50	
Jamaica Environment Trust	Ms. Diana McCaulay	929-3590	
Trelawny Parish Council	Mr. Andrew Harrison Acting Secretary	954-4838	
Trelawny Parish Library	Ms. Ambrozena Johnson	954-3306	

Sample of Invitation Letters

ENVIRONMENTAL SOLUTIONS LIMITED
89 Hope Road
Kingston 6, Jamaica, W.I.

Tel: (876) 978-9519, 978-6297, 978-5902
Fax: (876) 946-3745 E-Mail: envirsol@cwjamaica.com
Website: www.eslcaribbean.com
Visit us on Facebook! - http://www.facebook.com/EnvironmentalSolutionsLimited

21 Years of Service

August 29, 2012

District Officer
Falmouth Fire Brigade
7 Lower Parade Street
Falmouth

Dear Sir,

Re: Public Consultation on the Findings of the EIA for Coral Springs Residential Development, Trelawny

This is to advise that the National Environment and Planning Agency (NEPA) has requested that a Public Presentation be held to present the findings of the environmental impact assessment (EIA) study that was conducted for the proposed development.

The Public Consultation meeting will be held at the Kettering Baptist Church in Duncans on Tuesday 18 September 2012. We would appreciate if you would circulate or post the enclosed flyers within your organization.

We look forward to your participation at the meeting but if you are unable to attend, an authorized representative is acceptable.

Yours truly,

ENVIRONMENTAL SOLUTIONS LIMITED

Barry A Wade, PhD, OD, JP
Chairman

c. Mr. Chris Gore – Managing Director, Gore Developments Limited; Mr. Peter Knight – Chief Executive Officer, National Environment and Planning Agency

Flier

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Trelawny Parish Council Office, Water Square, Falmouth
Gore Developments Ltd., 2c Braemar Avenue, Kingston 10
Environmental Solutions Ltd., 89 Hope Road, Kingston 6,
NEPA Documentation Centre, 11 Caledonia Ave., Kingston 5,
The NEPA Web Site at www.nepa.gov.jm

For further information please contact:
National Environment and Planning Agency
10 Caledonia Ave.
Kingston 5
Telephone: 754-7540-42
Or their website: www.nepa.gov.jm

GOREHOMES
GORE DEVELOPMENTS LTD.

esl environmental SOLUTIONS

4.0 CHAIRMAN AND AGENDA

NEPA approved Dr. Mark Nicely, Principal of William Knibb Memorial High School, to serve as Chairman of the meeting.

AGENDA

For

PUBLIC PRESENTATION ON THE FINDINGS OF THE EIA FOR CORAL SPRINGS RESIDENTIAL DEVELOPMENT, TRELAWNY

Date: September 18, 2012

Venue: Kettering Baptist Church

Welcome and Introduction:	Chairman – Dr. Nicely
Opening Prayer:	**Community Member**
NEPAs Opening Statements:	NEPA Representative
Presentation:	Kimberly Bryan – Senior Environmental Analyst
Question and Answer Session:	All
Closing Remarks:	Chairman

National Anthem

Refreshments

GUEST BOOK

FOR

PUBLIC PRESENTATION ON THE FINDINGS OF THE EIA FOR CORAL SPRINGS RESIDENTIAL DEVELOPMENT, TRELAWNY

Date: September 18, 2012

Venue: Kettering Baptist Church

NAME	COMPANY / AFFLIATE	PHONE CONTACT	E-MAIL ADDRESS	SIGNATURE
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NAME	COMPANY / AFFLIATE	PHONE CONTACT	E-MAIL ADDRESS	SIGNATURE
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Patrice Gilpin	NEPA	754-7540	patrice.gilpin@nepa.gov.jm	
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Amy/Leroy Rodney		424 4468		
Oatis Johnson		954 2557		
Cliff Ford Mills	Coral Spring	560 1270		
FITZROY BUCKNOR	" "	954 2552 388 1282	SONMACK123@YAHOO.COM	
Lily HALL	" "	954- 2023	livelyhall@yahoo.com	
Lotaya Williams	Duncans.	389-6176.		L. Williams

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Robert Forbes	Montego BAY	486-8204		
Richard Smith	Duncans	867-5722		
Yvonne McFarlane	Coopers Pen Citizen Youth	373-4512		
DeAnford Bowman	Montego BAY	440-3663		
Christine Mint	Falmouth	437-2500		C. Mint
Glen Johnson	Coral Spring Community	416-7696	[illegible]1991[illegible] @Hotmail.com	[signature]
Keatine Fletcher	Falmouth	885-7315		K Fletcher
Tameica Pritchard	Falmouth District	853-6806	[illegible]@[illegible].com	T. Pritchard
Artless Andrade	New Town	487-9712		Andrade
Estrado Smith	Falmouth	403-7551		[signature]
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Danielle Andrade	Jamaica Env. Trust	960-3693	dandrade.jet @cwjamaica.com	D Andrade
Milton Williams	FLAMINGO BEACH	885-1884		[signature]

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Martin Jones	Stewart Castle	878-9644		[illegible]
Susan Koenig	Windsor Research Centre	997-3852	windsor@cwjamaica.com	[illegible]
Vernon Thelwell	Falce Dev.			[illegible]
Delroy Tewart	Trelawny Health	412-3518	mowied@live.com	[illegible]
S. Young	SPORT VALLEY	899-5582		S. Young
D. Thorpe	Duncans	954-9125		D. Thorpe
Winston Bansie	Jamaica Public Service	878-3543	wbansie@jpsco.com	[illegible]
Jason Gordon	Falmouth Youth Club	578 9522	j-gord019@yahoo.com	[illegible]
Wendell Stewart	Former MP.	383 5455	Keongee.stew@	[illegible]
Garth Wilkinson	Mayor	841-2509	garthwilkinson@yahoo.com	[illegible]
Devon Brown	SDC, Trelawny	247-2666	devlloy@gmail.com	[illegible]
Tamara Kloodit	NEPA	410-3119	Tamara.kloodit@nepa.gov.jm	[illegible]

NAME	COMPANY / AFFLIATE	PHONE CONTACT	E-MAIL ADDRESS	SIGNATURE
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Wayne Robinson	Gore Developments	3844468		
DURAND PINGUE	TRELAWNY PARISH COUNCIL	890-7059	durandp@trelawnypc.org	
MILITAE NAPIER	RESIDENCE	951-4547	Deidrick-Napier@...	
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Mary Docharty	Retret Height	9549259		
Hopelin Wallace	Retreat Height	9542594		
David Chung	FCS Consultants		dacefcsconsultants.com	
Olive McGibbon	Stewart Castle	347-3068		
Althea Green	Stewart Castle	383-7195	agreen@nhtt.gov.jm	
Maxine Carolin	Kettering Dist	840-3193	Maxinecarolin@yahoo.com	
Dane Moodie	Kettering Dist	522-1036		
		896-6978	jeanmercielewis@yahoo.com	

5.0 PRESENTATION

6.0 VERBATIM REPORT

VERBATIM NOTES OF THE PUBLIC PRESENTATION

ON THE FINIDINGS OF THE ENVIRONMETNAL IMPACT ASSESSEMNT FOR THE PROPOSED RESIDENTIAL DEVELOPMENT AT CORAL SPRINGS TRELAWNY HELD AT KETTERING BAPTIST CHURCH ON SEPTEMBER 18, 2012 COMMENCING AT 5:48 PM.

PRESENT WERE

Dr. M. Nicely - Chairman

Dr. B. Wade

Ms. K. Bryan

Mr. G. Campbell

Mrs. L. Walters

Mrs. D. Gross

Ms. F. Blair

PARTICIPANTS:

Ms. M. Hall

Rev. V. Fletcher

Mr. G. Wilkinson

Mr. F. Buchanan

Mr. Johnson

Ms. Y. McFarlane

Ms. G. Lewis

Mr. W. Stewart

AND OTHER INVITED GUESTS/COMMUNITY MEMBERS

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Chairman: A pleasant afternoon everyone; is it evening yet? It is good to be here. We are here today primarily to participate in the Public Presentation of the findings of the Environmental Solutions Limited for Coral Springs Residential Development to take place in Trelawny where it is good to be here at Kettering Baptist Church. And there are a number of persons who will be speaking to you today. They include persons from the National Environmental and Planning Agency, as I mentioned before Environmental Solutions Limited, and of course, once we have had the presentations then we will be opened for questions and answers. As you listen keenly and pay attention, you might have some questions that you wish to ask, some concerns you wish to raise. And we have a number of persons here who I know will be more than able to satisfy your terms and queries.

At this point in time we are going to call on Reverend Dr. Vincent Fletcher to lead us in an opening prayer.

(Rev. Dr. Vincent Fletcher prayed)

Chairman: I am going to ask the persons seated at the back if you could move a little closer as there will be a multi-media presentation done and you might be missing the details if you stay as far back as you are. So I am going to ask you to try and move forward you can come as close as you possibly can so that you do not miss out on any aspect of the presentation. As you can see the screen is not very large so you need to move as close.

Thank you very much for responding so positively.

As this point in time we call on our National Environment Planning Agency representative Miss Francis Blair to come forward with the opening statement. And I ask also that just before her opening statement, she will introduce to all of us the other members of her team.

Miss Blair: Good afternoon everyone. My name is Francis Blair, I am from the National Environment and Planning Agency, and I have my colleagues here with me Mr. Panton, Miss Gilpin and Mr. Morris.

I will be reading the statement from the agency as it relates to the Environmental Impact

Miss Blair: Assessment Process. By the way, you can follow along on the screen.

On 23 April 2012 Gore Development Limited applied for an environmental permit for the establishment of a housing development comprising five hundred and forty-two (542) residential lots on approximately sixty-eight (68) hectares of land at Coral Springs Trelawney.

Included in this development plan are four hundred (400) two-bedroom units, one hundred and forty-two (142) service lots, a centralized sewage treatment and disposal system comprising of septic tanks and constructive wetlands. Areas reserve for commercial development, a basic school, football field, nature reserve and park.

The information submitted in support of the application was reviewed, a site inspection conducted and it was determined by the agency that an Environmental Impact Assessment which is otherwise called an EIA was required for the

project. The applicant was advised and the draft Terms of Reference for the EIA was submitted. The

Miss Blair: TOR was reviewed by both internal and external stakeholders and subsequently approved in letter dated 20, 2012. The EIA was submitted to NEPA on July 24, 2012 and circulated for review and comment to the Trelawny Parish Council, the Trelawny Parish Library, South Trelawny Environmental Protection Association, the National Works Agency, the Water Resource Authority, Marine and Geology Division, and Jamaica National Heritage Trust.

The agency is currently awaiting comments which, when you see it, will be reviewed, collated and communicated to the applicant for the necessary actions to be taken.

This public presentation has been mandated by the NRCA and is being undertaken by the applicant in accordance with the terms outlined in the document entitled; ***'The guideline for conducting public presentation'*** dated 25 of October 2007.

Please note that the public consultation is an integral of the review process conducted by the agency, and that based on the issues raised or

Miss Blair: comments submitted by the relevant stakeholders, the applicant may be required to provide clarification and/or additional information in the form of an addendum.

It is very important that all participants are aware that the agency is represented at this meeting to only observe the proceedings and to hear the issues being raised. The agency will not participate in answering any questions at this time. Please bear this in mind that no final decision has been taken on this application.

We wish to remind to remind you that the process with respect to the public presentation for the EIA is as follows;

(1) A copy of the verbatim minutes of the public presentation is submitted to the agency by the applicant within seven days of the public presentation.

The public is allowed up to thirty days after the date of the public presentation to provide the written comments to the agency.

Miss Blair: Upon receipt of the comments they are collated and sent to the applicant for response to be provided.

Once responses are received, a submission is prepared to facilitate deliberation on the technical merit of the project in advance of the recommendations being made to the Natural Resources Conservation Authority, the NRCA, for a decision to be made.

Please note carefully that final decision on the application is the sole responsibility of the NRCA.

We do remind you that the EIA document is available for access via the public at the following locations; NEPA documentation centre, on NEPA website, the Trelawny Parish Council and the Trelawny Parish Library.

Thank you.

Chairman: I want to thank Miss Francis Blair for the opening statement which really put this evening's proceedings in prospective.

Chairman: And now we will call on Miss Kimberly Bryan, Senior Environmental Analysis, Environmental Solutions Limited to make a presentation.

Miss Bryan: Okay good afternoon ladies and gentlemen. It is my great pleasure this afternoon to present the findings of the Environmental Impact Assessment. This is actually my first time in Duncans, so and I am very pleased to be here and it feels very hospitable in the community so thank you for your hospitality.

So we will skip through the introductory slide.

So the project site - does anybody here knows where the Dry Valley property is? Nobody, Okay the project site is located approximately two kilometers to the west of Duncans, and about one kilometer west of Stewart Castle and it is immediately North of Dry Valley property. It is separated from the Dry Valley property by the North Coast Highway.

Alright just to zoom in, I am sure the light is not as good you would want. Zooming a little on the property itself, if you notice you will see

Miss Bryan: the yellow line, that is the actual site, you will see a lot of road networks within the boundary area.

So the property was subdivided already in the 1970s, it was approved for a 380 lot development, and for various reasons that people in here might know, it did not quite take off as planned. So only about – well exactly thirty-nine (39) people legally have titles on the site and twenty-six (26) of these titled owners have built their houses thus far.

Okay, so this is an illustration of the proposed development layout and we have a few across the room and in the corner of the room. The development features four hundred and one, (401) two-bedroom units and these will be located towards western and northern sections of the property. Sorry I don't have a pointer, but the pinker areas to the north and the west that is where the four hundred and one,(401) two-bedroom

units will be built and then towards the east, the southeast the yellow looking parts of the

Miss Bryan: property, they will have service lots. These will be a little larger and people can buy and develop as they wish on the service lots. This is what a typical house looks like built by the developers, Gore Development Limited.

The project features several typical amenities that we would expect in any new development in this day and age. We have several green spaces in the area, I think it is probably one of the greenest of three developments for GDL; we have electricity and water supply, and drainage upgrade will be done in the area. There will be sewage treatment facility on the site, and a commercial area, that purple area that you see to the left, to your left, that area will be a commercial area and then there is a proposal for a gas station to be built there, obviously for convenience sake because the nearest gas station is quite a bit away from there.

A basic school – well land for a basic school has also been allocated within the property.

Miss Bryan: So what is the EIA? The EIA is basically a study that describes the environment into which the development will be placed. It looked at the various impacts that the development will have on the environment as well as the impact that the environment can take on the development as well. And then we look at appropriate ways to reduce these impacts, prepare our report and submit it to the regulatory agencies. So we will make use of the data that is already there whether it is the main or whatever we have to do first and collect new data where it is appropriate.

So a multi-disciplinary team of environmental professionals came together along with other specialists, consultants such as engineers and architects and we collected our data by doing a review of background documents, field studies, various intrusive tests, like collecting soil

samples and water samples and so on, we had laboratories studies, we did interviews with some

Miss Bryan: of you in here and from other communities in the greater Falmouth area.

The terms of reference was also approved by the National Environment and Planning Agency, Miss Blair spoke about that process. We can move on from there.

The main point – beside our technical role and consultancy, the main point, we are not the proposers of the development, and Gore Developments Limited are the proposers. Another critical thing about the consultants is that at all times we have to practice at the highest ethical standards so that it is reflected in our analysis and reports.

The team, who is the team? We have with us Dr. Barry Wade, the team leader from Environmental Solutions. Dr. Wade please identify yourself, George Campbell socio-economist, Kimberly Bryan, Marlon Beale and Simone Lee our ecologists, they

are not present this afternoon, Roderick Ebanks was our archeologist. In addition to our EIA team

Miss Bryan: Gore Developments had some specialist consultants we have the architect from Portico, Doris Gross representing Portico, FCS Consultants and the engineer Miss Walters is here. Okay I don't see any of the other persons here. Brian Richardson was our hydrologist and we had geotechnical engineers and surveyors on the team as well.

So between November 2011 when we first met with the client to discuss the project, we had quite a few things that has led us up to here with all the different studies and the different analyses that we had to do,the community surveys, the EIA was submitted to NEPA. We are following the process to meet with you and have your feedback to present that report in the process as explained by Miss Blair.

I am just going now to give you some background on the physical, the biological and the socio-economic environment of the site, Okay.

Miss Bryan: So we started out with topography because this is fairly critical to how the site was developed. To the east, we have two sloped areas and these are the areas that will be subdivided so those are the highest points essentially on the site. To the west and the north these are the flatter lands and that is where the developer will be building two-bedroom houses. And there is the southern section, is the area that we spoke about before that has the thirty-nine (39) titled lots and some of the houses are built, over twenty houses presently exist in that southern area of the site.

Alright, so the soil, we did a soil study of the site, all across the site, several - well six boreholes were successfully completed to give some information on the type of soil, you know, the infiltration rate and so on, the compaction strength, etc. From the soil profile we see that most of the surface material is fairly weathered limestone, if you have been to Coral Springs you

will see it is a fairly characteristic environment mainly limestone and there is some clay material especially close to the sink hole, the central sink hole in the middle of the site.

Alright, hydrology and drainage. The central - I just mentioned the central sink hole, this is pretty much in the middle of the site and it controls the drainage of the site and a wider area which we will look at in a bit.

Miss Bryan: Typically a visit to the site will show you the high water mark to be about at the 15 meter contour, that is generally where it is. So these are some images of the sinkhole, it is a very heavily vegetated area so all you are seeing really is a little water and some vegetation.

Alright so the wider area, if you notice that purple polygon, that is the entire drainage basin for that area. The sink hole in the middle - you can show them the middle please – somewhere in that region that is where the sink hole is and all of that purple area drains into that sinkhole. So it is about 315 hectares of land that drains into that sinkhole. The northern

Miss Bryan: section of the site does not drain in that area,

it drains towards the north in a natural drain. So the catchment is essentially divided into two by the North Coast Highway so the Dry Valley property drains over to the site and it is conveyed by a culvert underneath the highway.

Some of the studies that we did such as water quality are fairly important. There is a spring that leads from the Dry Valley side into Coral Springs, we monitor this spring in several areas. We monitored from Dry Valley that is before it gets into Coral Springs, then the second site in Coral Springs after the spring passes the houses where most of you probably live, and then we also monitored two different sites within the sinkhole itself. What we found was that generally the water coming in, especially after the housing in Coral Springs, they have high levels of certain contaminants like BOD and iron so it is likely that the contamination might be from within that area.

Miss Bryan: The sinkhole levels were much lower in our study, so it is probably serving as a sink for the contaminants in that area.

Okay so natural hazard, we have to look at natural hazard in any environmental assessment, the site is prone to flooding, the lower areas in the site are generally prone to flood.

Hurricane, like the rest of Jamaica, the site is vulnerable to flooding, to earthquakes we are in a seismically active zone.

In terms of landslide we don't have any historical evidence of landside on the site, and no pollution; we have not gotten any reports of pollution incidences within the site or surroundings.

Okay the biological environment, when we did our assessment, at least going on to the site you can distinctly see different zones. So if you change the slide – so we have domestic cultivated zone which is where most of you would live, you have introduced your own species into the environment

there; typical example bougainvillea, bamboo, and typical fruit trees that Jamaicans would have.

Alright so we have – there are two sets of limestone forests. We have a closed thick one which you will find mainly on the flatter areas on the west, alright so a lot of the growth is very thick and it is very heavily wooded.

Miss Bryan: Next slide, and then towards the cane section it is more open we have less dense shrubs in the lower areas and the upper canopies are not as thick and the typical species are like red birch, logwoods.

And then the sinkhole area you will notice a very, very different change if you go onto the site, it looks very different and it is defined as a riverine vegetation there, so like bamboo and vegetation like that would be seen in that area.

Okay, Faunal species - we did a bird survey, we found approximately 38 species, 13 of them are endemic, they are only found in Jamaica. We found

three sub-endemics, twelve resident species, and eight winter migrants.

Miss Bryan: Other fauna, we found butterflies two of which were endemic species to Jamaica, they had croaking lizards, bats, termites, fireflies, one Jamaican Slider Turtle was seen in the sinkhole.

Alright socio-economic environment; the site is located within an area that is vastly emerging as a tourism area. We have different heritage attractions around the area; we have the Falmouth deep water pier, new housing developments like Stone Brook and Florence Hall alright. Some of the communities that we studied that were of particular concern to the project, obviously Falmouth being the parish capital and Coral Springs because that is where the project is being developed, Duncans, Stewart Castle, Carey Park and Retreat Heights were all of interest to us.

Some of the things that we looked at, how people viewed the project, what benefits they thought of the project, their general environmental concerns

which of course were pollution, deforestation and sewage treatment.

Miss Bryan: Social infrastructure within the area most of them are centered around Falmouth the typical things like utility, water, electricity, telecom, public health facilities, we have two main schools within the area William Knibb High School and the Holland High School other facilities like the fire brigade and the police service, transportation and so on.

Okay in terms of heritage we did an assessment across the site, the site is very heavily wooded, so what we were able to see were just a few remnants. For instance in the sinkhole you will note that structure to the left which is possibly some sort of storm water feature. And there is a packed stone wall around the sink hole which could be another significant heritage feature.

Alright so looking at the impacts as we said, the Environmental Impact Assessment, we had to look at the different impacts from the development as

Miss Bryan: well as how the environment can affect the development. And so the construction phase has to be assessed as well as how the development will be affected during the operations. The impacts can be classified as positive or negative, direct or indirect, short-term, cumulative and so on.

Alright, so we are just going to go through the most significant ones clearly we don't have the time to do everything, but we will do the most significant ones. Air quality is always an issue with construction sites as well as noise because you know we are blasting and doing all sorts of different activities that will generate dust and noise.

The two sloped areas we spoke about before those are two areas that need to be clearly monitored during development. Impact comes

from clearance of the site and the cutting and the filling of the slope and so on.

Miss Bryan: Alright, drainage and hydrology; the sink hole is very critical to the area so anything that is done to the sinkhole that can cause it to flood it is obviously something that we have to look out for. So things like the blasting activities that can take place, erosion of sediments from other activities during construction and anything that will block the sinkhole in anyway or outlets within the sinkhole, can all cause flooding. And water quality, we spoke about how we monitor the water quality from one point to another. Construction and operations of the development can impact the water quality, run-off from the different activities going on. The sewage if it is not properly treated can cause all these things, fuels and other chemicals being used.

Alright, the natural hazard, that is an example of how the environment can affect

the development. So we did speak of earthquake and hurricanes and so forth.

Miss Bryan: Ecology, clearly if we are building about 150 or more hectares of land we are going to lose quite a significant amount of vegetation and hence the habitats that occupy these areas. The habitats also become fragmented and this will affect the different faunal species, the different animals that occupy the sites.

Some of the socio-economic impacts - employment of course this will be a positive benefit from using, pulling labour from the local force as is seen in other projects within the area. Traffic will become an issue both during construction and operation. And solid waste clearly is another big one, both from construction and operation.

Okay some of the mitigation measures that are typically used - in terms of air quality it is advised that you use a phased approach to clearing vegetation, you don't clear

everything at one time you clear it within phases, so you minimize a lot of dust and

Miss Bryan: the exposed areas. Wetting the surfaces during construction is another typical practice and ensuring that your staff, your construction crew has the appropriate gear.

Alright, for the slopes, the two major slopes will be subdivided so it has to be carefully done. The vegetation especially on the steep escarpments, it is advised that the vegetation not be removed from this area and the cut and fills that are made, if they are made that they be properly stabilized.

Alright, mitigation for drainage and hydrology; the engineers have come up with several different types of mitigations. They have divided the sites into sub-catchments to channel the water, I think, three main areas I think two of them will lead – two sections will lead into the central sink hole and that northern area will be channeled towards the north, towards the drain in the north.

Okay, other efforts that will remain which is very critical is in the area of the sink hole, the hard brown clay, it is proposed

Miss Bryan: that this area will be – it will be removed and compacted with a type of material that can allow for greater infiltration capacity. So it means that the flooding that you have now will not be more than what you presently have, it is designed to reduce some of that.

A no-fill zone up to a certain point can also be established for the sink hole. So the sink hole has to be well protected, if you remember the site plan, there is no development in that area it is all green, that big green thing.

Sewage treatment, because we know that if it is not properly treated there is going to be an impact on water. The sewage treatment system – it features a septic tank on each lot, each lot will have an individual septic tank and then the sewage will be pumped from there by lift station in constructed wetlands and we will have four large

constructed wetlands on the site and then it goes from there with chlorination chamber to

Miss Bryan: ensure that the bacteria and so on are removed so it does not go into the environment. The final discharge will go into the sink hole. This is an example of a similar system that was built at Florence Hall; at the top left you will see what the reed bed looks like under construction and at the bottom left that is a fairly well-grown reed bed.

Alright, ecology - trying to minimize the presentation as much as possible within the time. Green space allocation you will see that the sloped area we've made as best to use of some of the areas to keep some of those areas green.

Lastly for people who are building in the area or buying lots it is recommended that they can introduce some of the main species or retain some of the species on the site.

Waste management, a typical problem I supposed we have across the country places with warning signs and people are still throwing garbage but, we will still need to

Miss Bryan: erect warning signs around the sink hole because that is a critical area that should not become clogged or anything.

Heritage, some of the things that - because we did not see much on the site, but there might be other features on the site so it is recommended that the Jamaica National Heritage Trust be on site to ensure that anything that was buried is preserved. This is an example of how Gore Developments has retained the heritage in a picture shown here. That is Florence Hall, this was a Great House, this on the left that is how we found it in 2007, that is what it looked like on the right when it was a plantation, and this is what it looks like today. So that is a good example of the type of restoration that the developers have done to a heritage feature of importance.

Cumulative impacts - we can expect that we will have cumulative impacts from such a major development; we are looking at more

Miss Bryan: urbanization in the area, we are putting in an open commercial area with a gas station. So we are looking at definite urbanization there, more dust and noise, ingress and egress, getting in and out of the development. The highway and the impacts there, the impact on the drainage basin, particularly if there are any new developments within the area.

Some of the alternatives that we looked at in terms of sewage, the developer can probably consider allowing the other residents to tap into the sewage system that is being built. For the sloped forested areas, it could be retained as a natural forest, under a programme with the Forest Department. And of course there is always the no-build alternative which means that the site will not be developed; no upgrading will clearly take place.

And that is it for us this evening, thank you so much for your attention. (Applause)

Chairman: I want to thank Miss Bryan for a very comprehensive overview of the work done by Environmental Solutions Limited.

At this point in time we are open for questions which, of course, will be answered. And so, if you have a question you can just indicate by just raising your hands. We have some cordless mikes there so that what you say can be clearly heard. And the steno-writer will need to capture it on her device.

So we are now open for questions. So please state your name. If you are from the community then you could state your name. If you are from a particular company which has not been mentioned already please indicate the agency from which you are representing.

Okay we have a lady in the centre there.

QUESTION AND ANSWER SESSION

Participant: Good night I am from Coral Springs. Now on your chart we are the one that is closer to the field right in the corner where there is a road behind there. Now, right now we don't have any problem with the traffic, but our concern is once the people move in, we are going to end up with trucks and lots of vehicles at nights and I think it is going to cost a lot of problems for us. So what is your idea about that road?

Chairman: Thank you for your question.

Mr. Johnson: Glen Johnson from Coral Springs.

Chairman: Sorry, just a minute. Are we taking the questions and then the answer?

Mr. Campbell: We will take them one at a time.

Chairman: Okay, so that first question will be answered in a little while.

Mr. Johnson: My first question is who are we directing our questions to?

Chairman: The Environmental Solutions, I would assume.

Dr. Wade: Thank you. Just let me explain that the questions being asked are being recorded as well as the answers. As Environmental Consultants and Environmental Solutions Limited, we represent the developers in this. We take the questions and the answers and incorporate them into a report which is sent to NEPA. And if NEPA requires or so demands of us we then have to address these in an addendum to the EIA process.

So at this stage you are addressing the questions to Environmental Solutions Limited, if we can't answer it ourselves, for example, if we have to refer it to the engineers or the architect or the developers we will do that. But ESL is responsible for taking the questions and to provide suitable answers.

So my name is Barry Wade, I am chairman of Environmental Solutions Limited and I am the team leader for the EIA. So there was one question and you were about to ask another

question so you can go ahead and do so and I will try and answer both.

Mr. Johnson: Okay, your team has put this package together. How much local knowledge did that team have from the area?

Dr. Wade: Well, Doris Gross, the architect she will give a response to the first question and then I take it.

Mrs. Gross: Thank you. Well I just want to step up and point because I don't have a pointer to the map to explain to all of you a little bit more what the road looks like and how we propose that traffic will flow at the entrance.

As most of you are aware, there is an existing entrance into the Coral Springs Development and that will be retained as your main entrance. The main entrance will lead the new population into the development like this and pass the existing houses not through the existing houses, of course, both

will be retained for you all to go to your homes.

Mrs. Gross: As the new population enters they are taken through one neighbourhood that is separated from the next neighbourhood. It is anticipated that this road becomes a sort of a ring road taking the next set of people home and then since you know the lands you know that in this section it is quite like a sloping hillside that it is proposed to be developed as service lots only. By that time there is quite a journey to get to here to continue on the next ring road to the next sort of development to then come back down towards the existing home owners.

Now this route is most likely not driven by most people. Most people will want to enter, go through and come back out. It is only a small section of new home owners that would most likely drive through here to come out.

We had asked permission for a second exit to help the traffic situation but because it is

a very busy highway and the line is very difficult for more than one entrance it was

Mrs. Gross: not permitted so the exiting entrance had to remain.

Participant: My home is at the corner right there that is where we are. I am asking about that road entrance right there, that access?

Mrs. Gross: This road indicated is the main road which takes persons down to the land by the sea. It is a right of way that we were asked to retain and it couldn't be change. We are not using - the development is not utilizing this road, but it has to be retained as a given. So we are not anticipating any of the new traffic to go here. Okay thank you.

Mr. Johnson: Okay, let me finish. You started on that point I would like to raise an issue. The exit as you said is going to remain. I am not sure if you are aware of when the highway was constructed what actually happened. There is no entrance; in fact there is no entrance to the community. We

have lost one entrance because of the elevation of the highway, and now it is

Mr. Johnson: actually very dangerous coming in and out of the development. And to then put four hundred plots units to use that entrance is a recipe for disaster. To carry twenty-five homes it is very dangerous and to now add four hundred straight away plus another one hundred and forty service lots is tenable you know, I don't see how this can be accepted.

Mrs. Gross: Okay the engineers will be working out details for this entrance. The way the entrance is being constructed now works as you say for the home owners but it will be enlarged and detailed differently. Bur it is not going to be relocated or a second one added to it, so hopefully a detailed one will help.

Mr. Ennis: Excuse me I am Ennis, right at the road right there, right on the left, the main street right there. I have a home that is Lot 120 that would be 140, so you are going

to change my route so that I have to go all the way back think about it I have to go all

Mr. Ennis: the way up there at about a mile to get to my property there. I was here before they start the business so what is going on?

Mrs. Gross: Okay, I would suggest that I know about your case. I would suggest that you discuss with Gore Developments separately and we see the particular situation that can be discussed further. So right now this is how the plans are and perhaps if you discuss it a little further one can find a solution for you. I am just opening this up, I am not suggesting a solution, I don't have the answer right now, but I can suggest that we can discuss it further.

Mr. Ennis: I would like to get an answer within 30 days because every time we talk they want 30 days, so I am asking today for 30 days to get my answer.

Mrs. Gross: Thanks.

Chairman: Over to my left and could you remember to state your name.

Mrs. Lewis: Gene Lewis, a resident of Coral Springs. First of all good evening ladies and gentlemen; I welcome any new development in this area but there are some huge question marks. As you can see the layout of Coral Springs, what guarantee us as residents here that we will not be flooded out? Also re-blasting what is it that is going to be in place that there are no large cracks. We suffered from huge cracks years ago when the highway was being built. What is going to guarantee us again that won't reoccur again?

Also the spring water that we are now basking in, how will it be affected by this development? We are enjoying birds of all species as you mentioned earlier all varieties, what is going to be happening to them? We enjoy hearing their melodious voices that wakes us up every morning what is going to happen to them? No disrespect to you guys, we see what has been happening in

Florence Hall those little houses I would regard as doll houses, are these houses

Mrs. Lewis: coming to Coral Springs? Are there trees going to be planted, because if you look at Florence Hall you can see the place is bare? What is going to be happening, will somebody explain to me?

I mean I know you have general answers, but I need the specifics, I think you can elaborate some more. Thank you.

Dr. Wade: I will take the last question first before because that one is fresh in my mind.

Gore Development provides the basis for a two bedroom house but they also provide land with sufficient quantity for improvement and if you look at the history of Gore Development elsewhere, you will see that individual owners have improved on their properties. They are responsible for landscaping and for planting and if they wish for any improvement in the dwelling. All you have to do is to look at how this

has been handled in various developments by Gore. Now Florence Hall is very new, it has

Dr. Wade: not been completed yet, in a year or two you will see a different profile of the development, it takes time, we know that, that happens.

Your question about the water quality; first of all I going to ask Miss Walters to speak on the drainage and the issue of flooding. But just to say, the plan of the development is to improve the general drainage in the area. The mechanism was described briefly but if you want further discretion we can provide that. Essentially you are going to create a larger area for the water that is drained into the centre of the area to the permeated through the underground to the aquifer there and out. And a study that has been done indicated the level of permeability and so on and so forth. But that is not to say that there will never and ever be any further flooding in the area. Flooding is a fact now, what we are designed

to is to increase the area. So what we have done is look at a hundred year

Dr. Wade: potential flood and find the design for them. One of the slides indicates that, I don't know if you would like further description of that. So I will ask Miss Walter to speak to it. You asked another question with regards to?

Mrs. Lewis: With regards to sewage.

Dr. Wade: The system involves individual septic tanks with the effluent flowing to reed beds, three or four reed beds where the nutrients are absorbed by the vegetation and the bacteria level greatly reduced, but after that there will also be a chlorination chamber which will bring the bacteria level to the standards that are required.

If you have any doubts about this I would encourage you to visit the plant at Florence Hall to see how this is operated. Essentially this is the exact same system that is being proposed for Coral Springs.

Mrs. Lewis: What guarantee is there that there will be no blasting?

Dr. Wade: There will be no blasting.

Mrs. Lewis: What guarantee?

Dr. Wade: What guarantee? Well let me make a general statement here and I am not sure if any representative of the National Works Agency is here this evening. All of the construction planning which have to deal, first of all with traffic and with any such works have to be approved by the National Works Agency. And in the case of any earth movements or if there any suggestion of blasting by Mines and Geology Division; they set the standards and they are the ones to monitor it, but right now there is no plan for blasting.

Mrs. Lewis: They blasted at Florence Hall but right now I suffer from the very thing, and there is a problem with compensation.

Mr. Gore: We have never blasted at Florence Hall that is not correct.

Mr. Buchannan: Fitzroy Buchanan, a resident of Coral Springs. My problem right now is that where the houses are on the flat is subjected to flooding and with the stripping of the hillside to build all these houses what will happen to the run-offs from the hill?

Dr. Wade: Okay, I am going to ask Mrs. Walters to answer speak to that. Again I will just, simple by saying, that the calculations have been made and to the amount of run-off that will take place, we will deal with it, that is my introduction and I will ask Mrs. Walters to speak to it.

Mrs. Walters: Thank you, Kimberly, we can go back to the flow outline. Currently when we do an analysis with rainfall data provided by the net office, in the rainfall experienced one in a hundred years this is where we expect the flood limit to be. One in fifty years somewhere about here, one in twenty-five years about here. Okay, one in ten years flood means that every ten years you expect a certain rainfall depth that will cause a

Mrs. Walters: flood. And one in a hundred is one times in a hundred years you expect to find that flooding. In my lifetime I have only experienced a one in five flood and I am over five years.

So to alleviate flooding what we have agreed to do is between the 13.5 cantors which is outside the water level of the pond, to the edge of where Gore Development owns at the back what is currently a community area, we are going to reshape that area, take out the hard clay that is very impermeable and replace it with material like shingle and then plant grass on top. That will cost the hundred year flood line to move back and every successive flood level to come back, so we plan to reduce flood potential.

Mr. Buchanan: I am not sure if I understand you very well, but I will tell you something that happens about ten years ago. We had a very heavy downpour that lasted for about two and a half hours and at the end of those two and a half hours all those houses – my house,

Mr. Buchanan: there was one foot of water throughout the house; it draws down later on leaving the mud. But my question is, when more water start coming down from the hillside when it is stripped, what are you going to do to prevent the water from – that excess water from going down the sink hole?

Mrs. Walters: We can't prevent the water from going down the sink hole; we intend it to go down the sink hole but because what we are doing the regarding the exercise it will accommodate the additional water that is coming.

Mr. Buchanan: Is the sink hole adequate to take away additional water?

Mrs. Walters: In its current capacity it is not adequate to take away any water that we currently experienced in the one in a hundred years, but with the improvement it will be adequate.

Mr. Buchanan: And what if not?

Mrs. Walters: Then you and God have a good conversation.

Chairman: Alright thank you.

Dr. Wade: There is another aspect of it, if you know the sink hole now you will know that there is a lot of rubbish around it, a lot of vegetation and rubbish and so on. Two things, one is to clear the area of rubbish and you know that one of the problems of sink holes is that they get clogged.

Mr. Buchanan: Yes.

Chairman: The other thing is, what she is saying is that because there is thick clay in the basin that reduces the infiltration of the water so that will be replaced, that clay will be removed…

Mr. Buchanan: You will have a greater run-off when it removed. If it is permeable, the water will be soaked down.

Dr. Wade: No, no what you are doing is increasing the permeability by removing the thick clay which prevents water from going down, so you are encouraging, you are enhancing the

Dr. Wade: infiltration of the water to the underground.

Mr. Johnson: With due respect, if you are concreting over, you know, with four hundred tighten densely lots how will that negate what you are trying to do there?

Dr. Wade: Because we know from the rainfall…

Mr. Johnson: But you don't know. I asked the question, who has local knowledge of this area on your team and I didn't get an answer. If you talk to the local people they will tell you. But you are now significantly creating higher density and you are saying you are doing something to end that which you are not. You are just bringing it back to the neutral situation.

Dr. Wade: No, no this is what I am trying to explain to you. We know very well the present situation. We know this by speaking with the residents, by speaking with people in the area and by our own analysis, we know what weather pattern is, we know what rainfall

Dr. Wade: and what not. So we do know that there is a flooding problem. How do you improve it? You

improve it among other things by increasing the permeability of the drainage area that is what we have been discussing; you improve it; to take present flows and any additional flows.

Mr. Johnson: Just certainly if you access tracks that – I don't if Gore or your team cut to do your analysis that is where the significant problem is with some of these houses. I don't know if you actually visited the site to see. Did you visit the site to see the actual rainfall to what happen to those channels because they were cut, it brought down some serious amount of debris just off the hillside and there is nothing up there yet, there is no building on the hillside, yet but this is what happens so far, that is the reality.

Mrs. Lewis: Sorry you just can't estimate or assume you have to be there when it rains.

Dr. Wade: Not necessarily there will be a one in five year rain or things like that...

Chairman: Hold on a minute, please there are a number of other persons who would like to ask questions. So I am asking after this next question if you could just allow somebody else to ask.

Mr. Johnson: I am actually being told by some of the residents to ask questions, that is why. You actually cut these channel to your analysis and you have created problems, they would like you to come and clear that problem that you created.

Mrs. Gross: I do appreciate the questions Chairman, and to cut drainage is going to be a problem of loss to persons here. I think we don't mind to answer it satisfactorily. And there were two parts that I would like to make to his concern, may be the do help a little apart from the engineering proposed that had been studied in depth, there were two other things that we had to do. One, your concern

Mrs. Gross: that when you do develop certainly at a much higher density of development and a much higher amount of paving, concrete and

asphalt that because of that the engineers are going to design a drainage system on the property towards the trees and those trees are going to take in that excess water and it certainly is going to develop underground and take it away from the land. So if engineering going to happen which is not in place right now after this channel has been cut to the size.

And the second point I would like to make right now is in the planning of the land we have looked at the very steep slopes of which one is here and all the way along here and these areas have been left green, they will not be stripped, there will be vegetation which will tend to alleviate the amount of run-offs that are going to - all accumulating in this lower basin and since you don't know the area I actually understand your concern. So there were two

Mrs. Gross: other major things that were done to help the drainage.

Chairman: Thank you.

Dr. Wade: I do not know if you have seen or read the Environmental Impact Assessment Report, but this matter of drainage which we recognize is an extremely important aspect, it is covered in details there and while we can't get involved with the details here tonight; I ask you to read it and if you have any further questions address it to us and we will seek to respond to it.

Rev. Fletcher: Thank you very much; I am the Reverend Dr. Vincent Fletcher, Pastor of this church.

Two or three things, one the drainage that we are talking about, after you have completed your development what is the possibility of that sink hole being blocked by the debris. That is one. Number two earlier on over the year…

Dr. Wade: Can I respond to that one. We are not depending on the sink hole itself to carry off the water it is the whole drainage basin. So although the sink hole is a part of that drainage basin, the whole plan is based not on the sink hole itself taking off

the water for the whole drainage basin. That is why the engineer has spoken about removing clay from that larger area. So we are increasing not just the actual permeability, but the entire area for that infiltration. So it is not just the sink hole.

Chairman: Just before you – perhaps we could hear what quantity of clay – in terms of removing, what quantity?

Dr. Wade: Fifteen feet deep by twenty-five house lots.

Chairman: Fifteen feet deep by about twenty-five house lots so you can kind of imagine the…

Dr. Wade: One hundred thousand square feet, it is not in my head but that is what we are talking about.

Rev. Fletcher: Sir after the development is completed, and the developer's sort of move out whose responsibility it will be to ensure on a long term basis that these anticipated problems - if these anticipated problems do come up who will be responsible to take care

of these problems on a long term basis? And then some time ago…

Dr. Wade: Hold the question and let me answer. The National Works Agency and the Parish Council if they approve the development, when the development goes ahead they are responsible for maintaining the works which have been proposed and the works which they have accepted. Same thing with the roads, the traffic and things like that. It becomes a public responsibility.

Mr. Wilkinson: Did I say good afternoon to you all. And I am really proud this afternoon and the citizens of Coral Springs, you have raised some of the right and pertinent questions and it is upon you that this community depends on and the people of Trelawny. I am

Mr. Wilkinson: Garth Wilkinson, I am the Mayor of Falmouth. And I had to – I really had to stand because you made a comment just a short while ago because we are here basically – I have two reps which is Mr. Pinky from the Roads and

Work Department and Mr. McGill from Planning.

You made a comment that I had to rise to my feet when you said it is upon the Parish Council and NWA. NWA is not here, but you cannot do a development and we all, and all the agencies including NEPA who is here this afternoon. When you submit, or any development submit a plan or submit their plans it all comes to all agencies and we make our comments and it is based on what all the agencies said that the Parish Council approve. I don't want; I could not for the life of me understood what you meant. The Environmental Solutions basically should have looked at all the mitigating factors that is why you are here today making this presentation. I don't want you

Mr. Wilkinson: to tell the people that it is up to us after your presentation or whatever happens to them five years, ten years down the road. (Applause)

Dr. Wade: I don't want to be misunderstood but apparently I have been misunderstood. So I apologize. What I am saying is that the developers present a proposal okay, which has to be looked at scientifically and from a management point of view. If the project is approved, as they have indicated, and the developers complete the development as they have been instructed to do, outside of all this grace period the developers cannot have the responsibility in the long term for the infrastructure of the development, meaning that would take them into whenever. The responsibility of the developer ends at some time. Mr. Chris Gore of Gore Development is here and he will speak also to it because he has also had experience with other developments.

Mr. Gore: Good evening ladies and gentlemen. As far as our understanding is, we have to be approved by the authority one of which is the Parish Council. If we comply with all the conditions of approval only then will the

Parish Council will consider taking over the infrastructure. In addition, in fact if we are able to achieve that and it is approved and we comply the Parish Council also charges us a maintenance fee which is calculated based on the roads, the levels of roads, the area of the drains, the width of the culverts and if we build it according to what has been approved and the Parish Council accept it we also have to pay a maintenance fee over to them which they are to use to maintain the infrastructure that they decide if they are taking over or not. That is the way we have experienced it and that is the way I know of it with developments all across the island. They will only take it over if we comply with the conditions that they have stipulated and we

Mr. Gore: have pay the maintenance fee and we have to maintain it for a period of time. Thank you.

Rev. Fletcher: Sir Can I just say a word on that. I have seen a number of developments around the area. For example at Duncans Bay if you go

down there now you see they have been for years, you have to fly across those roads no maintenance and all those things. It might not be relevant to this one but of course, they are doing that development and the possibility is that the road might get into disrepair and stay there.

The question I want to ask some time ago on the news at Florence Hall an adjoining community they were agitated because the stench, the stench from the sewage was unbearable.

What is the possibility of this sewage system that you are going to establish that adjoining community and maybe the same community, the existing community will not be terribly affected by the stench?

Rev. Fletcher: And then, what will be your source of water supply when it affects other areas will you have enough water coming there. And then, the question was asked. You spoke about the natural habitat that wasn't answered that there were some endemic creatures there.

What about – will this development destroy the natural habitat of these animals and what have you?

Mrs. Gross: Before venturing into your last three points about sewage and natural habitat, I just would like to close out the concern of Mr. Buchanan and Reverend about unfinished, incomplete and unsatisfactory development. There may be developments out there in Jamaica quite true and there is the concern that Gore development have a perfect track record of every development that they have done that the Parish Council took over all the infrastructure and it was built to satisfaction standard. And as Mr. Gore explained, of course, the development has a right to move away from the development

Mrs. Gross: after it becomes public ownership. So Gore Development track record is not like some of the others you have heard of. I cannot speak to the others.

Dr. Wade: Thank you. Let me address the issue of sewage.

Sewage treatment and disposal has been a national problem in Jamaica we recognize that and there are many developments in which sewage not only has been but continued to be a problem, so that is a given. One other problem why sewage has been in problem, sewage treatment is because they have descended to a large part on mechanical treatment of the waste.

In recent years there has been a significant shift in technology to using biological treatments so that you do not depend on the public electricity supply, you don't depend to any great extent on mechanical equipment which fails and so on and so forth.

Dr. Wade: So what we have done at Florence Hall and now also at New Harbour in the Old Harbour Bay area is to move to a biological system which elsewhere is well-known, it is well-known as a reliable, long term, high treatment system. While we have in Jamaica not moved to that in the past, is largely

because it requires more land space. So you have to devote to more land space of a biological treatment system.

At Florence Hall as you saw on the slide we have moved to a biological system in which the final treatment of the sewage is done by natural plants, but we call it in the area a reed bed. The Florence Hall system has been operating now for over two years and it provides some of the best treatment of sewage anywhere in Jamaica and we dig the standards anywhere else.

We are confident that if we move to the system, not only in the Gore Development projects, but in the other projects we will largely solve the problem of sewage

Dr. Wade: treatment and disposals in the developments of this sort.

The system that is being operating has not only been approved by the National Water Commission but actually has been commended by them who are responsible for the overall

for sewage development. And since you asked the question, let me tell you also in time, the National Water Commission who is responsible for sewage treatment will take over the plant that is the arrangement, when they have the years of confidence that the sewage treatment is meeting all the standards which they have set and NEPA have set. So we are confident that moving to this system will provide consistent high quality treatment that is required.

Mrs. Lewis: How far from the present community will the sewage plant be?

Dr. Wade: It will be in that overall central area.

Mrs. Hall: How many feet, how many miles?

Dr. Wade: It is not miles, it is in the community.

Miss Bryan: Alright, at least each house will have its own septic tank and the waste from that will be pumped into the reed beds. There are four reed beds sites and I will show you where it will be located. So one of them is here (indicating) the brown region here. The existing development lies

in this area the southern area, the wide area here; so that is one of the reed beds this is the second one third and fourth. So this here, here and here.

Dr. Wade: Could I just say that I understand what you are saying and I understand your expressions very well. All I do is invite you to go to Florence Hall. I understand your concern; it is a great concern everywhere base on experience here and elsewhere that there is solution; sewage does not have to be a problem.

Chairman: There is a gentleman in front here who has been waiting for some time now to ask a question, go ahead, sir.

Mr. Schant: I am Mike Schant, from the Winsor Research Centre. I want to come in on the flooding issue.

First of all, I know you subcontract hydrology or hydro geology to Brian Richardson, I read his paper and I understood it.

Now I want to give you a clue first of all, in your EIA you put the hydraulic productivity as measured to be something like ten to the minus

three, ten to the minus four. You then said that a practical observation by a man, I forgot his name, shows floods last from a week to a month or something like that which implies hydraulic activity of ten to the minus four or ten to the minus five those figures were in the Richardson report. However, you interpretation was wrong because you said that the observed drainage is better than the monograph theoretical drainage, that is incorrect it is actually ten times to a hundred times worse than what the monograph predicts. So that is a clue, it is a clue to suggest that your model is wrong and indeed the model is wrong because the entire drainage calculation which are fine as such are predicated

Mr. Schant: on surface water drainage into the sink hole. Sink holes don't just sink they blow as well. So it correctly says in the hydrology geology that the sink hole is controlled by ground water and fishers in rocks. Clearly the fishers are constant so her ground water is what controls the sink hole flows. Now, neglect the ground water then when your flow comes from the storm comes

into the sink hole your calculations will look okay. But at the same time as the rain as the falling in Coral Springs, it is falling elsewhere in Trelawny, it is causing the ground water to rise, and in effect, the local rain fall in Coral Springs is probably developed. The ground water rises and there is nothing you can do about it. So Coral Springs is in a sink, Coral Spring is what you call a 'pupae' and the flooding is going to occur even if you remove the clay and replacing it with gravel it is not going to solve the problem. The problem is ground water table rises and so that is why the ground water stays up so high for so long, longer than predicted. And we all know that the ground water just two

Mr. Schanat: hundred meters away at the spring, that ground water is 30 meters higher than the sink hole. So the ground water - the water table around is very variable, very different we cannot really predict it, but your model is wrong because it is based on sink holes only flowing downwards. That is my main point I have two other points, but they are different subjects.

Dr. Wade: Well thank for the observation I cannot to the technicality aspect of it here and how and I don't know that the engineer is prepared to speak do it. But what I will ask you to do please put it in writing for us, we will examine it and we will share it with the relevant underground water resources and others to look at that. If there is a flaw we need to know about it and we will address it but we are not taking it at face value that there is a problem, but put it in writing and we will certainly examine it.

Chairman: Go ahead with the next.

Mr. Schant: When you were talking about a hundred years storm you talked about 24 hours and that is

Mr. Schant: international best practice, but it is not appropriate locally because we had a big storm here in the Trelawny in the last three days so you have rain starting off because of the three days typically reaching a crescendo. Thirdly, the relevance of that is that in a hundred year storm your water table will rise considerably because it will have couple of this rainfall to feed on before the biggest part of the storm.

Dr. Wade: Will you put that in writing so that we can examine it.

Mr. Schant: The other one, okay you are going to use independent septic tanks for each house? What are the capacities - sorry this is a multi-point question. What is the capacity of each of those septic tanks?

Mrs. Walters: Two days.

Mr. Schant: That is what I was afraid of. In the regulation that I looked at they all require a thousand gallon minimum, but what you are talking about in the septic tank is your anaerobic decomposition and volume, size is important not just the free

Mr. Schant: flow. Indeed the volume there and the time spent. So let us assume you were going to put in a thousand gallons of septic tanks, now the solid depth in the area you are talking about is quite shallow, the rock beneath it is very hard, you are not going to be putting individual septic thank for each house in that hard rock. I suspect having use jack hammer on this rock here, you are not going to be buried in the rock.

Mrs. Lewis: The individual houses are going to be around those septic tanks?

Mr. Schant: So you feel you are going to be using septic tanks in the rock. We look forward to seeing it.

My final point is that all this sewage is going to go into the sink hole, it is either going to be polluted or it is going to be chlorinated. In terms of wildlife, this either is bad because even very diluted chlorinated water is a problem, you are immediately adjacent to Coral Springs protected area which has some valuable fresh water and salt water celinas and mangrove swamps. If the water from Coral Springs is connected

Mr. Schant: underground to the Coral Springs protected water reserves I think it is connected underground under any condition, that is to say under dry weather, dry conditions or storm conditions then the impact of your sewage, be it chlorinated or un-chlorinated is going to be a disaster for that protected area. (Applause)

Dr. Wade: Let me respond to that.

Rev. Fletcher: I believe I have a follow up question to that. From the septic tanks to wherever the treatment is to the sink hole, to the ocean how would it affect our beach and all those things, what about contamination? (Applause)

Dr. Wade: Honest concern. Let me tell you that sewage is not going into the underground, sewage are not going into the underground. Let us separate clearly in our minds what sewage is and what sewage effluent is after treatment. Okay and I again refer you for practical demonstration to the Florence Hall Treatment Plant. This is actual experience. Okay and

Dr. Wade: we have to think of it, in our estimation some of what is going into the drainage it will be of improved quality to what is presently going in there. So let's us not get blown away that we are putting sewage into the ground please, please okay.

Mrs. Hall: Lily Hall from Coral Springs, I understand that one of the reed beds is going right behind my house and some other houses, I

would like to know how we will be affected by this reed beds.

Mrs. Gross: One quick answer. There will be a buffer zone around every reed bed, every area that is very green looking even though the sewage treatment requires that you have a buffer zone all around so it cannot be joined directly to someone's lot. There will be a green buffer zone around every reed bed area, ten or twenty meters I don't fully remember the number. So when you see an area that says sewage it includes a buffer zone within which is the sewage treatment.

Chairman: Yes, gentleman to the left, yes, sir go ahead please.

Mr. Stewart: My name is Wendell Stewart, I just – I am asking this question. I have looked at other developments and I have not seen anywhere really that you speak about storm drain. And Rev. Fletcher asked the question but I am just taking it to another level. Wasn't there a sink hole, is there an alternative way that this scheme is set to deal with drain water run-offs? You have any

catchment area, check point area for the run-offs. Mr. Buff speaks about the flooding that is now experienced in the old section without all this development. And I am just asking, I see where it wasn't said or laid out, so I am just asking is there an alternative to take surplus to do anything with water, should there be some natural cause for the storm drain to be clogged?

Dr. Wade: I am going to ask Mrs. Walters to speak to that because the drainage system takes in all features of drain requirement. She will speak in detail to it.

Mrs. Walters: Okay, this diagram does not show much about the storm drain. What it shows is each location where we will be picking up from. If you have a chance to go to the Parish Council and look at the drainage plan please feel free to do so we have quite a bit of piped mangroves, inlet chamber, and sediment traps in those plans and I am sure that the Parish Council will show them to you. There is no alternative to go into the lower sections of the property which is by the sink hole. Any excess rainfall which would happen in a

catastrophe event would have to rise to the level of the high way and flow down. That is the only physical way possible or alternative.

So the existing drainage features are - the current drainage, the final current drainage feature with improvements. What was the other question?

Mr. Stewart: Is there any additional improvement or consideration to the scheme dealing with this problem that you mentioned that would be incorporated in what is going to be?

Mrs. Walters: Yes, it was mentioned before that we are improving the permeability of the land that we own so that we can experience – he said it will take a couple of hours for the water to final flush out and after a couple hours it goes away. So what we intend to do will, I am not sure which property is his, but it should go away in a lot less time. And for major storm events or smaller storm events he should not experience the same problem. I recognize that the gentleman beside me have concerns about the permeability numbers, we

do have – we had soil tests done and we did monitor the bore holes and we did experience some of the water rushing in, filling up and coming down. So we have recognized and we do understand what can happen in the area. We may not - because we have not been there for years and years and years, we would not have experienced all possible things that could have happened.

Chairman: Oaky, there is a question coming from the centre.

Miss McFarlane: My name is Yvonne McFarlane and I live in the neighbouring community Coopers Pen. We have had a sewage problem based on the system that was developed at the Coopers Pen area, it was expected that the sewage would work. There were times when the equipment failed to work and the stench took the whole community.

The sewage itself is an open area, will the sewage be an open area or will it be enclosed. And will the land around the sewage area who will be maintaining it.

Because the land that we had around our sewage is like a jungle it is hardly ever been maintained. So who is going to maintain the land that you said you are going to have around the sewage to ensure that it is acceptable to the community? (Applause)

Dr. Wade: Thank you for the questions. I am not sure if I fully understand but let me say two things. One is that the present system which as I have explained, an biological system, is not an open system *per se*, okay it don't

Dr. Wade: have a septic tank which goes underground into the reed bed in which the effluent is passing below this forest of reeds; so that there is no surface water for you to encounter. The situation you have described will not exist here because the design is completely different.

Now, after the system has settled down, the development is finished and there is sufficient experience in time, the National Water Commission takes over the system and they are responsible for it. But I need to

stress again and I will do it again and again that at present this biological system that is designed is not one in which there is mechanical failure, lack of oxygen or any of the things which have made sewage treatment plant throughout Jamaica and elsewhere for years and years. It is a system based on the natural treatment by these plans, so we don't anticipate anything else.

Miss. Bryan: The developer is prepared to facilitate a trip to the Florence Hall plant so if we can agree on a time, with the citizens of Coral Springs, if we can agree one the time and a date; we can sort that out afterwards.

Chairman: Gentleman to the right.

Mr. Mowatt: My name is Delroy Mowatt I am from Health. Interestingly I have listened to all the discussions re the sewage treatment and surely I am aware of how the system functions. However, this biological system whereas it might seem as if it does not have problems, but when you do your chemical analysis of your effluent then

within that for instance, if the reed beds are not functional then you are going to have added chemical coming out and even your chlorine that comes to your tank might not be sufficient to take care of all the various parameters that the Ministry of Health and NEPA would want to assess for. So we should be mindful of those.

Dr. Wade: Let me tell you that we have been referring to the Florence Hall treatment since inspection it

Dr. Wade: has been - the effluent has been monitored on a regularly basis and the results have been sent on a regular basis to NEPA okay. So we have now two years at least of recorded chemical results if you want to call it that of the treatment system so I guess that can be a part of the public record if you access NEPA to see what we are talking about and it is in the hands of NEPA.

Mr. Mowatt: No, I am just saying that I am mindful of this, because I have had the experienced of other system similar to yours that you are now proposing that has the problem.

Dr. Wade: In Jamaica?

Mr. Mowatt: Yes, Sir.

Dr. Wade: I would like you to share that information with me because I don't have that information.

Mr. Mowatt: Your septic tanks, you intend to put individual septic tank on each and each drawings that will be presented to the local planning authority?

Dr. Wade: Yes, each septic tank with a modern design will be on each property and that has to be approved.

Mr. Mowatt: I am just asking.

Dr. Wade: The answer is yes.

Mr. Mowatt: The question of water quality came up and so I would just like to ask two things. The sink holes that will be the area for your final effluence; I am also concern about the volume that will be going into these sink holes and possible challenges thereafter, that is what I am concern about?

Dr. Wade: Could I ask you to look at the report in which the volumes are well worked out. If you have a problem with them, could you let us know and what is the major problem. But they are all there, you

may not agree but I am asking you to look at that and to let us know.

Mr. Mowatt: Last question from me. I did not hear anything, there was about three or so thousand persons – just make a rough estimation because of the number of building solutions that will be living in Coral Springs, have you looked at the impact that it will have among other things now, but I am also thinking about the hospitals?

Dr. Wade: Yes, the report deals with that and the report…

Mr. Mowatt: And indeed it is going to mean…

Dr. Wade: The report identifies where there is insufficiency in the social infrastructure, not sufficient as it is now, that is no. So the report deals with that okay. Remember that in an impact assessment we are assessing all the aspects biological, chemical, physical and socio-economic aspect. In the report the inadequacy of some of the social infrastructure is highlighted okay. Let me say, however, that this is a problem which goes beyond Gore Development Limited at this particular development because people are

living in anyway in the area and more people will be moving in too, and of course there will be more pressures but there will also be more benefits. So we have identified those and again I refer you to the report to see what is being recommended here.

Mr. Johnson: Just coming back again, just to continue with sewage your most southern reed bed and the area you have identified for that is an area that is

Mr. Johnson: prone for flooding and that development that is happening behind it, just to the points that were being made.

Mrs. Walkers: As a condition, we had very early discussions with many agencies one of which is Water Resource Authority on flooding in the area and the water quality; and all of the designs that we have done are in conformance with and there is a standard and what they have requested that we either recognize that area and flooding as such, we have elevated and adjusted our outlets of the region above what we considered a hundred year elevation as per the guidelines of the Water Resources Authority.

Mr. Johnson: You are talking about the most southern reflex?

Mrs. Walters: Yes.

Mr. Johnson: I just wanted to make sure. The final question I really wanted to raise was, you stated we are doing what we can do with the area that we own okay. Within the area, that is the crux of the matter as I see it because the EIA, from what I can see and I have read you know, quite a bit of

Mr. Johnson: it stands alone it does not consider most of the other developments that is happening all along the coastline and this is a major problem with a lot of these things that are happening. Yet the EIA, they just look at their little area, and you know, where living in situation all these things affect each other not just sewage but the environment in general and this is a very serious issue that we need to look at okay.

Dr. Wade: Let me comment on that if I may. It is very recognized that the Falmouth area in general is an area of rapid development taking place and one of the, well there are a number of concerns about any rapid development whether the infrastructure

will be able to keep up with it. one of the things that Gore Development, as well as other developers does, one of the things is to draw the attention of NEPA and the regulatory authorities to, in this case, the rapid development that is taking place around - let me give you one example of this because it has come up in this forum and in other forums.

Dr. Wade: The matter of sewage, we as developers as well as environmental scientists would like to see the whole matter of sewage for the Falmouth area developed on a comprehensive basis, not by development by development basis, you understand what I am saying. In the long run that clearly is the way to go. But you have to ask the question whether you stop development until you have that or you proceed with the development in the best way possible, all of the time working towards in this case a master sewage plant. And Gore Development has indicated to NEPA, not only that they wish to see in the long run or even the medium plan a comprehensive sewage system but

that the system which Gore has developed will be used as a model for treating the sewage of the whole area. That is an issue which it is critical to the whole developmental of the Falmouth area. And we commend it to you as citizens and for the movers and shakers in the society to move in this direction of not only for sewage, but for all social infrastructures that it requires.

Miss Ducharty: Good night to all. My name is Mary Ducharty and I am from Retreat Heights joining that district. My question is, when the developers start in Coral Springs, there will be a lot of dusts, a lot of noise, a lot of inconvenience and I want to know if the Coral Springs people are going to be compensated?

Dr. Wade: Okay, you don't have to think about compensation, you want to think about mitigation. And again NEPA and the National Works Agency and others will set the standard which must be met. If they don't meet the standards they have the authority to shut down the construction until that is

done. If the developers break or do not comply with that then the penalties can be applied. But that is the system we work under, and it is up to the citizens to be a part of the monitoring to see to see that the standards are maintained.

Mr. Schant: I am still on sewage. You gloss over a little bit the question of sewage going into

Mr. Schant: the sink hole, so I understand that the normal condition is sewage and I applaud biological sewage treatment. However, I am thinking about post events such as the hundred year storms and I kind of got the impression from you just now that you are saying that the reed beds are outside the hundred year flood level which is kind of answer part of my question. The other part is, I am trying to work out how deep the gravel is, it looks like too deep. So velocity is like 25 percent. So if you have 80 inches of rainfall it would entirely fill up, in other words…

Mrs. Walters: No, no. The depth of the reed beds below the ground level, if you look at any one of the cross section - the distance between here and here (indicating) is the equivalent depth of a hundred year storm for this area. To make sure that no water that falls in the reed bed in a one hundred year plus event is going to come out of the reed bed.

Mr. Jones: Martin Jones of Stewart Castle. I have an interest in the environment, so I want to know what is going to happen to all those natural resources and the natural species that we have down there?

Dr. Wade: You want to know with regards to the species within the natural wildlife. We are very clear in the report that removing some of the forest will definitely impact certain of the birds and the other species. There are a number of considerations though; first of all it is that the development will leave a substantial amount of forest in place so that it is not total forest removal. I am not saying that birds will not be

affected, they will be, but they will not be decimated I want to make that clear.

Secondly, is that the nature of removal it also to facilitate that the wildlife can move from where the forest has been removed into the area where they are not being removed so that there is not the factor of destination, but there is reduction in the habitat area.

Mr. Jones: What about the space?

Dr. Wade: Our estimation is that they were not being cleared there will be enough space there will be an impact. So what we tried to do is to mitigate and create solutions otherwise. Okay and there are adjoining areas which can absorb, accommodate those which will be replaced it won't be a hundred percent but it will be significant.

Miss Andrade: Good evening my name is Danielle Andrade and I am the Legal Director for the Jamaica Environment Trust. I only have a few questions. Firstly you are right Dr. Wade when you said the system you are designing is better than what exist for many of the sewage treatment systems in Jamaica. In

our experience, however, we have been contacted by numerous communities who complained that after certain period some of them, I think, over 20 years after a residential housing development has been built the developer has not maintained that sewage treatment system and left the onus of that on the community. The community for various reason whether it is lack of resources they feel incapable of maintaining it themselves. One of

Miss Andrade: those systems are actually similar to your system. And we had a scientist look at your sewage treatment engineering report and they had questions about the kind of monitoring plan that will be in place, long term plan for this sewage treatment system. They wanted to know if there were plans in place for regular harvesting and replacemental reed beds, they want to know what kinds of plants were being put in, all these sort of things. So I just wanted to know if there was any plan in place to go and enter into some kind of an agreement with NWC prior to permit approval. But then to accept responsibility for this after a certain period of time, you know, I

think the people will want to know who do they address their concerns to on a long term period. And I know it is not fair twenty, thirty, fifty years down the line to expect the developer to still hold that responsibility; but they need to know who will be the appropriate person prior to the permit being granted.

Dr. Wade: Prior or post – prior to the permit is the developers who are responsible. But clearly after

Dr. Wade: that and compliance, then the National Water Commission take over, and then the National Water Council is responsible for maintaining okay.

You asked about the matter of harvesting, and so that is part of the ongoing system.

Miss Andrade: So you don't have anything in place in terms of what timeframe you are looking at when you are handing over to NWC, you have not yet decided that?

Mr. Gore: The agreement terms for the Water Commission to take over the treatment facility is when we have 60% occupancy within the development and the plant is obviously meeting the conditions. One

year after that we have to maintain it, and then after that year they will take it over provided it meets all the effluent standards.

Miss Andrade: Thank you. I also have another question. As was pointed out this residential development adjoining the protected area and I want to know whether or not there was a buffer zone and what was the size of that buffer zone?

Dr. Wade: A buffer zone between the houses and the - the natural system exist for joining. To put in a buffer zone between the development and the natural system is 25 meters the natural system is the buffer between that and anything else.

Mr. Jones: How much space is available?

Dr. Wade: How much space is available, it is not in my head, but we have the numbers.

Mrs. Gross: The open space is more or less 30 acres and the entire development is one hundred and seventy and that is a large green area – the entire project consist of one hundred and seventy acres but what is revealed on the map is roughly 40 acres worth of green spaces a combination of communal area

with fields and other sports as well as the natural reserves that remains in the original space of which others will be a sloping area and that is a very high ratio of the area and no other development has that. And it arrives taking it from the natural resources that we found that we did not want to disturb.

Mrs. Gross: Of the 40 acres most of it is natural reserves and some of it is communal area, but the majority is natural reserves. The park area which is the communal area is about six acres of the forty, but it is green and it is soft, forty acres of one hundred and seventy for persons to enjoy a home that is the nature of the project.

Rev. Fletcher: Sir, two questions. You said that the actual sewage will not go into the sink hole. I am still concern about the fact that like the Glistening Waters is two of its kind in the world, and we are happy to have one right in our environment. Also the Burwood Beach. Now you said that the actual sewage will not go there. The question I am

asking, what will be going into the sink hole, into the ocean, what impact will they have on the Glistering Waters and on our beach?

Dr. Wade: Suppose I told you none. You want to know why?

Rev. Fletcher: I did not ask why, I am asking what will be the impact.

Dr. Wade: That is what I am trying to explain to you. This question also arose with regards to Florence Hall which is much nearer to Glistering Waters and much nearer to the sea okay. So if it is a concern at all, you will expect that Florence Hall would be even ahead of Coral Springs.

So what I am telling you now is that a careful monitoring over the life of Florence Hall today, what is going in the case of Florence Hall into the wetland and not reaching Glistering Waters is highly treated effluent which in some cases is of a higher

quality than the natural run-off, you understand what I am saying to you.

So I am saying to you, that if that goes for Coral Springs which is what we are designing it to be, the impact will be nil.

Rev. Fletcher: Sir, you seem to be saying that Florence Hall is the perfect system and it has just

Rev. Fletcher: passed two years you said. And you spoke about proper monitoring. What if you reach the point where there is a proper monitoring of the plant, what will be the effect on the beach and on the Glistering Waters?

And finally, correct me if I am wrong. This forum is meant to satisfy requirements of protocol, but in the final analysis this forum would affect no decisions, correct me. (Applause)

Dr. Wade: My friend, if we approach it that way, if we approach it that way then you and we have wasted our time. I do not know how many forums like this I have attended and presented to, several across Jamaica. And I

will tell you that almost without exception that the results of the public hearing have been used to fine tune and improve and in some cases even to halt development. So please do not start on the premise that you are wasting your time. If you do that then there is no possibility of improvement, this is what the forum is all about.

Dr. Wade: So, we are saying to you that if there are serious concerns you put it in writing, you have a period of 30 days to send it into NEPA and they will use the information that they have – first of all they will ask us to address it in an official way. And then when it goes to the board they will make the decisions.

Let me point out one other thing, that Environmental Solutions Limited is not the proponent of the project we are the environmental consultants. So we take very seriously all of your questions and comments and was raised, a very technical matter, which was said, if we can't deal with at the top of our head put it in writing and let us look at it seriously. So if

you have concerns, for goodness sake, don't write it off and say it is a useless exercise get involve, get involve with the process. And the NEPA representatives are here, they are here first hand and they are here to hear us too, whether we are being fair to you. I hope that helps.

Rev. Fletcher: I would not put Glistening Water matter in writing.

Dr. Wade: You can put anything and everything in writing my friend, please, please.

Mrs. Lewis: Why is it that you did not have a meeting with the residents of Coral Springs before this forum?

Mr. Campbell: The truth of the matter is that when you do the social impact assessment or the economic and social impact assessment, the form of meeting that we tend to have are one on one. So in the case of Coral Springs, I personally canvassed several opinions of the citizens that live there in addition, if we could find them, because in truth and in

fact, quite a few of the residents at the time were away, I am not sure if you are but I do recall where you live and we did visit on a couple of occasions over a two day period and weren't able to see you directly, I don't think. But we also sent in follow-up field workers to interview with a

Mr. Campbell: questionnaire the citizens. As a general rule, we would not necessarily have a committee meeting during this process. We would have asked the president of your citizens association to convene a meeting to which we would have attended, but certainly on those occasions where say, a community meeting is planned in any case, we would usually come and greet you. This is really the opportunity for the community to come and ask their questions.

Mrs. Lewis: Sometime ago I remembered specifically speaking to you and I told you who were the relevant person to speak to and to arrange a meeting, this was not done, I spoke to you a

couple months ago and I gave you the relevant person name, yes I did.

Mr. Campbell: Do I recall you have a president do you, at the moment, the citizens association and you had advised that we should have spoken to a couple of other persons.

Miss Hall: And I specifically told you Lily Hall, you could contact her.

Mr. Campbell: Yes, and she is the lady who manages the - if I remember one of the small hotel along the coast, is that the lady.

Mrs. Lewis: I am the person who told...

Mr. Campbell: I am sorry, we did so many.

Mrs. Lewis: Doctor, what evidence you have that Florence Hall has not affected Glistering Waters? What sort of survey have you carried out?

Dr. Wade: Well, do you have any evidence that Glistening Waters is being affected since Florence Hall joined in?

I am going to ask that if you believe in not only due process, but the technical

competence and integrity then we have to ask do we have any evidence. Now we will say we have no evidence of that but - of our monitoring and what we do – but if anyone has any evidence of it, please send it to us so that we can look at it, not only to us

Dr. Wade: but to NEPA so that it can be assessed. You can raise all kinds of questions. But in the absence of firm information or data we should avoid any speculation. And what we are saying from the monitoring that we have done there is no evidence that Glistering Waters is being affected by the treatment system at Florence Hall.

Mr. Wilkinson: I hope she did not say treatment system – was it treatment system you said that caused…?

Mrs. Lewis: No

Mr. Wilkinson: What she said, I hope I heard her right it could not be the treatment system it would have to be the development rather than the treatment system.

Dr. Wade: Okay, if you have any evidence that the development is affected, please let us know.

Participant: I have just an observation and probably just stretching your - there was a question asked earlier on about the entrance, being the

Participant: only entrance. That Spring Hill is a very swiftly travelled road and the entrance is in a corner – there is no sign on the road telling you concealed entrance. But I remember from the old road just down from the - I don't know if it is on your property there is a lovely paved entrance road that goes in, I don't know how far it goes, where it ends and it is properly paved. And I was wondering if probably, for the concern of the residents you could probably seek out incorporating it into a road, that little road that goes in, it is still I think, a part of the government's old road system. So I am just saying to alleviate the anxiety and the whole thing and signage should be put, because none is

put right now to tell you that there is a concealed entrance around the corner.

Dr. Wade: Essentially, Sir, these things are determined by the National Works Agency and the developers have to comply with whatever the National Works Agency said. So if there

Dr. Wade: is an alternative, suggest it to us and we write it up and we will pass it to the National Works Agency. But they are in the long run the determinants of that particular issue.

Mrs. Gross: I think what we need to do is to consider if the area entrance is being safe. We need to ensure that when the entrance of the scheme is being designed between the engineers and the National Works Agency that it includes strong consideration, filter lane and traffic stop light whatever their solutions are. So I think you should take your concerns there and make sure it is extremely safe intersection.

The drainage has to be included; the widening of that intersection has to be included. Actually there is actual a strip of land that is left as a part of the road improvement that we will require to do. So we cannot bring the development directly on to the highway.

Mr. Johnson: What I am saying is this, is exactly what happened when the highway was constructed, it was railroaded through and there wasn't enough consultation with the local people, right so the main drain is the only area where there could be a filter lane constructed to make a somewhat accepted entrance to the community. Right and you said that in response to the gentleman's question there, that the better alternative is an adjoining property how far is that property because that road there is a perfect option.

Mrs. Gross: I believe it is the road that runs along here, is it?

Mr. Johnson: The highway like to the end of your property the highway - the old road goes up to the right.

Mrs. Gross: This is the new highway and the old road is here.

Mr. Johnson: Why can't the developers conceal their significant entity and create an entrance

Mr. Johnson: from a really good acceptable alternative that exist at the moment?

Mrs. Gross: It was not considered since it was an adjoining property but we can have a second look with the NWA. If it is to improvement the situation it can be looked at, but it was not considered because it was not on our land, but public road does not mean we are allowed to use it.

Mr. Johnson: It is a public road that exist already right it is just that the highway dissected it and it is there right now.

Mrs. Gross: There is an existing entrance already and the NWA would not have one and create another one there, it is not a logical

issue, they would not allow us to have another entrance close to each other that is a safety issue also. If it is here if this is correct, but it is here (indicating) but from here to here that is too close to the entrance on the highway it would never get

Mrs. Gross: approved. I am just looking at it the plan, it won't be thrown out, it can be looked at.

Mr. Schant: I think Gore should pay a visit to Florence Hall what do you have to say about that? If not I would like to accept and other people would like to come, I am proposing you set it for 2nd October in the afternoon.

Dr. Wade: I don't think we can actually agree to the date right now.

Chairman: The second of October could be the date when the residents of Coral Springs be transferred to Florence Hall to do a viewing and so forth and so on and I probably think that you could work it through the chairman of the community – the president of the association, the Coral Springs Association.

Could that be possible, could you just make the contact there and work it through?

Mr. Campbell: I am not necessarily sure that the Environmental Solutions Limited needs to be a focal point for that communication. And if we don't, we will be happy to play a role if

Mr. Campbell: necessary. But I am saying they are literally neighbors and therefore it is just a question of the chairman communicating to the management that there are a number of people who would like come and they will arrange a meeting for them. We will be a facilitator, but it is an easy line of communication as you already know.

Dr. Wade: We have been going for a little while and we don't want to cut short on any discussion or what not. But we do have refreshments available and we can break and engage with any or all of us on a one to one and enjoy this, however you wish, as you enjoy this. A number of people have started to leave and I don't think I would want to go on.

Chairman: I noticed that the questions have all but ended; we have exhausted the question and answer session. And so it is probably best for us to do an official closing and then persons can move to refreshment.

Chairman: So if there are objections to that, there does not seem to be any objection. I would just like to say that we have had a long and intense and engaging evening. And I want to commend the residents of Coral Springs for the questions that have been asked, they have been very pointed relevant questions and they have been captured and once the report has been approved by NEPA it will be available on-line.

It would worth your while to make sure that you get a copy of the report because it will document everything that has been said to include the promises made and the commitments given.

And I want to comment the residents also for their keen interest in the environment which is something that we have been fighting for a long time for Jamaicans to take very seriously. And it is obvious that these communities take their environment very seriously and is keen on preserving the environment.

Chairman: I also believe very firmly that your input this evening will allow the Environment Solutions Limited to revisit various areas of what they have proposed and make the necessary tweets to ensure that improvements are made.

I have presided over a number of these public presentations, more to do with JAMLCO and them expanding their mud lake and this is a walk in the park in comparison to those. And so far you have been a good audience and you have been very receptive and very orderly and respectful in the process and I want to commend you all for that.

And I want to commend Environmental Solutions for sticking it out and responding to every ball that was bowled, some were hit for six and others you know, a different thing.

Can we all stand for the National Anthem?

(Singing of the National Anthem)

Chairman: We would like to thank Rev. Dr. Vincent Fletcher for allowing the use of the Church and for the various agencies for facilitating this session.

Refreshment is available at the back please feel free. And of course, the various agencies are still available and they will sit and have further dialogue with you if you so desire.

Adjournment taken at 8:13 p.m.