



**Western Cape  
Government**  
Environmental Affairs and  
Development Planning

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# **Coastal Management/Set-back Lines for the West Coast District**

## **Stakeholder Engagement Process Report**

Final

July 2014

## DOCUMENT DESCRIPTION

**Document title and version:**

Stakeholder Engagement Process Report

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## TABLE OF CONTENTS

<b>1</b>	<b>PROJECT DESCRIPTION</b>	<b>1</b>
<b>2</b>	<b>OVERALL APPROACH</b>	<b>2</b>
2.1	PROJECT OVERVIEW	2
2.2	PROJECT STEERING COMMITTEE	2
<b>3</b>	<b>STAKEHOLDER ENGAGEMENT</b>	<b>3</b>
3.1	PROJECT INCEPTION AND PUBLIC NOTIFICATION: STAKEHOLDER ENGAGEMENT #1	4
3.1.1	Notice of project commencement	4
3.1.2	Development of a stakeholder database	4
3.1.3	Background information document (BID)	4
3.2	STAKEHOLDER CONSULTATION AND PUBLIC MEETINGS: STAKEHOLDER ENGAGEMENT #2	5
3.2.1	Notification via e-mails	5
3.2.2	Advertising	5
3.2.3	Distribution of relevant material	5
3.2.4	Public meetings	6
3.3	STAKEHOLDER CONSULTATION, PUBLIC MEETINGS AND COMMENTS: STAKEHOLDER ENGAGEMENTS #3	7
3.3.1	Notification via e-mails	7
3.3.2	Advertising	7
3.3.3	Radio Advertisements	7
3.3.4	Distribution of relevant material	8
3.3.5	Public meetings	9
3.4	STAKEHOLDER CONSULTATION, REVIEW AND COMMENTS: STAKEHOLDER ENGAGEMENT #4	10
<b>4</b>	<b>ANNEXURES</b>	<b>11</b>
4.1	COMMENTS AND RESPONSE: STAKEHOLDER ENGAGEMENT #2	12
4.2	COMMENTS AND RESPONSES: STAKEHOLDER ENGAGEMENT # 3	60

## TABLE OF FIGURES

Figure 1: Project phases	2
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## LIST OF TABLES

Table 1: PSC meeting dates and locations	3
Table 2: Stakeholder engagement process	3
Table 3: Venues of Public Meetings	6
Table 4: Frequency of radio advertisements	7
Table 5: Venues of Public Meetings	9
Table 6: Issues trail for stakeholder engagement #2	12
Table 7: Specific comments received in response to Stakeholder Engagement #2	54
Table 8: Issues trail for Stakeholder Engagement #3	60

## ABBREVIATIONS

BID	Background Information Document
DEADP	Western Cape Provincial Department of Environmental Affairs and Development Planning
I&AP	Interested and Affected Party
PSC	Project Steering Committee
WCD	West Coast District
WCG	Western Cape Government's Department of Environmental Affairs & Development Planning
WCDM	West Coast District Municipality

# 1 PROJECT DESCRIPTION

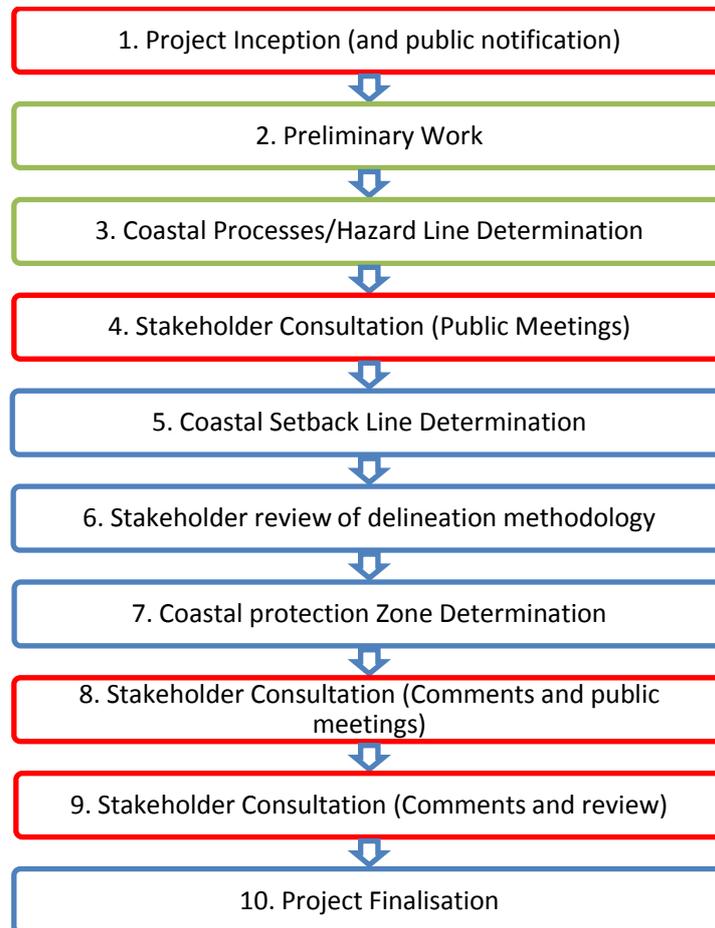
Royal HaskoningDHV was selected to assist the Western Cape Provincial Department of Environmental Affairs and Development Planning (DEADP) to compile coastal management/set-back line(s) for the West Coast district. The West Coast is the second district where coastal management/set-back line(s) are designated by the Western Cape Government, the first having been the Overberg District. The boundary of the West Coast District Municipality (WCDM) is considered as the boundary of the study area and is located between Silverstroomstrand in the south and Hoekbaai in the north. It comprises of five local municipalities / authorities, namely the Saldanha Bay, Berg River, Swartland, Cederberg, and Matzikama Municipalities.

This project demarcated three planning lines along the coast, a physical processes/hazard line, a coastal management/set-back line(s), and the coastal protection zone, based on a combination of expert scientific contributions and studies as well as anecdotal evidence and local knowledge.

## 2 OVERALL APPROACH

### 2.1 Project overview

The project proceeded through nine phases, as indicated in Figure 1. Note that the phases where public engagement took place are illustrated in red. Process related aspects are displayed in green.



**Figure 1: Project phases**

### 2.2 Project steering committee

Engagement with DEADP and an established Project Steering Committee (PSC) provided project management guidance as well as high level stakeholder input and continual guidance in the determination of setbacks. The PSC committee met six (6) times during the course of the project. A list of the locations and times of the PSC meetings are reflected in Table 1. PSC meetings were held at the offices of the West Coast District Municipality in Moorreesburg, unless otherwise indicated.

**Table 1: PSC meeting dates and locations**

Project Phase	PSC meeting date	Location
<b>2013</b>		
<b>Project initiation</b>	14 March 2013	Cape Town
<b>First Draft Coastal Processes/Hazard Line</b>	18 June 2013	Moorreesburg
<b>Completion of the first round of public engagements</b>	14 August 2013	Cape Town
<b>Progress update</b>	16 October 2013	Moorreesburg
<b>First Draft Coastal Setbacks Line/Coastal Management Line</b>	27 November 2013	Cape Town
<b>2014</b>		
<b>Project finalisation following the last round of stakeholder engagement</b>	30 May 2014	Moorreesburg

### 3 STAKEHOLDER ENGAGEMENT

This section of the report outlines the process followed in engaging with the public for each phase of the project i.e. red highlighted phases as per Figure 1. Four rounds of public engagement and a series of workshops were held during this project.

Please note that questions and comments were received throughout the project, and responses, are provided as an annexure to this report.

**Table 2: Stakeholder engagement process**

Phase	Number of stakeholder engagements	Description
<b>Project Inception and Public Notification</b>	Stakeholder Engagement #1	<ul style="list-style-type: none"> <li>• Notification</li> <li>• Authority notification</li> <li>• Compilation and maintenance of a stakeholder database</li> <li>• Compilation and distribution of background information document</li> </ul>
<b>Stakeholder Consultation and Public Meetings</b>	Stakeholder Engagement #2	<ul style="list-style-type: none"> <li>• Notification</li> <li>• Public review of Draft Hazard Lines</li> <li>• Compilation and distribution of background information document</li> <li>• 11 public workshops (8-13 July 2014)</li> <li>• Authorities consultation</li> </ul>

Phase	Number of stakeholder engagements	Description
		<ul style="list-style-type: none"> <li>• Compilation and maintenance of an Issues &amp; Response table</li> </ul>
<b>Stakeholder Consultation, Public Meetings and Comments</b>	Stakeholder Engagement #3	<ul style="list-style-type: none"> <li>• Notification</li> <li>• Public review of draft coastal management/set-back line(s)</li> <li>• Compilation and distribution of background information document</li> <li>• 9 public workshops</li> <li>• Authorities consultation</li> <li>• Compilation and maintenance of an Issues &amp; Response table</li> </ul>
<b>Stakeholder Consultation, Review and Comments</b>	Stakeholder Engagement #4	<ul style="list-style-type: none"> <li>• Notification</li> <li>• Public review of Final Draft Report</li> </ul>

### 3.1 Project inception and public notification: stakeholder engagement #1

The main aspects of the first stakeholder engagement process were to notify and inform the public about the specialist study as well as develop a stakeholder database.

#### 3.1.1 Notice of project commencement

Stakeholders were notified about the project via emails, posters and public advertisements. The public advertisement was placed in one local newspaper, the *Weslander* (06 June 2013), in two official languages (English and Afrikaans).

These adverts / notifications included an invitation to the public to register as I&APs, a notice of the intention to develop the setback lines, a description of the study area boundaries and finally, the key aspects to be considered in the study.

All relevant authorities, including all three spheres of government, were notified via e-mail. Consultation with and the buy-in of the five affected Local Municipalities was deemed critical to the success of the project and was therefore actively sought.

#### 3.1.2 Development of a stakeholder database

A stakeholder database was developed and continually updated throughout the project.

#### 3.1.3 Background information document (BID)

A background information document (BID) was drafted and made available to all the stakeholders via the websites of the Western Cape Government (WCG) and Royal HaskoningDHV (RHDHV). The BID provided insight to the purpose of the project, study

area boundaries, a general overview of the project process and the key aspects to be considered in the study, project details, applicable legislation, and the role of stakeholders.

## **3.2 Stakeholder consultation and public meetings: stakeholder engagement #2**

The second stakeholder engagement process focussed on making the information on the projected hazard lines available to the I&APs. Engagement in terms of how the information could or should be used for coastal zone planning was also undertaken in the form of workshops.

### **3.2.1 Notification via e-mails**

All stakeholders on the database were e-mailed a notification of the public workshops and where to find information on the project.

All relevant authorities, including all three spheres of government, were notified via e-mail. Consultation with and the buy-in of the five affected Local Municipalities was deemed critical to the success of the project and was therefore actively sought.

### **3.2.2 Advertising**

The public advertisement was placed in one local newspaper, the *Weslander* (4 July 2013), in two official languages (English and Afrikaans).

I&APs on the stakeholder database, affected landowners, as well as the general public were notified of the availability of updated information and public meetings via a public advertisement in the *Weslander* (4 July 2013) in two official languages (English and Afrikaans).

Several newspapers published articles on the project including the *Weslander* (11 July 2013).

All adverts included a further invitation to the public to register as an I&AP, as well as where to find additional information on the project.

### **3.2.3 Distribution of relevant material**

The draft report on the hazard lines of the project were made available to all registered I&APs for a comment period of 40 working days. .

The following information was provided on the WCG website and RHDHV website:

- Hazard lines generated during the risk modelling process
- Background Information Document (English and Afrikaans)
- Stakeholder Engagement Presentation
- Summary Report (English and Afrikaans)
- Poster (English and Afrikaans)

### 3.2.4 Public meetings

Eleven public meetings / workshops were held during this phase. The purpose of these meetings was to:

- Communicate the purpose of the project;
- Communicate the results of the risk modelling exercise;
- Obtain comments on the risk modelling results; and
- Source suggestions on how the risk information can or should be used to manage development.

The towns and venues in which the meetings were held and the respective dates and times are listed in the table below.

**Table 3: Venues of Public Meetings**

Town	Venue	Date / time
<b>Yzerfontein</b>	Municipal Hall, c/o Dolfyn and Buitekantstreet	8 July (11am -13pm)
<b>Saldanha</b>	Civic Centre, Goodhope St	8 July (5pm - 7pm)
<b>St Helena Bay</b>	Sandy Point Community Hall, 2 Albatross St, St Helena Bay	9 July (10am – 12am)
<b>Patenoster</b>	Paternoster Hotel, St Augustine's Rd, Paternoster	9 July (4pm – 6pm)
<b>Velddrif</b>	Town Hall, Voortrekker Road, Velddrif	10 July (10am – 12am)
<b>Dwarskersbos</b>	Die Saaltjie, Main Road	10 July (4pm – 6pm)
<b>Elandsbaai</b>	Elands Bay Hotel	11 July (10am – 12am)
<b>Lambertsbay</b>	Community Hall, Quickfallsingel st	11 July (4pm – 6pm)
<b>Strandfontein</b>	VCSV Hall, Kabeljou Street	12 July (10am - 12am)
<b>Ebenhaezer</b>	Community Hall	12 July (3pm – 5pm)
<b>Langebaan</b>	Multipurpose Centre, Antonio Sieni St no. 7	13 July (10am – 12am)

All comments were collated into an issues trail table, discussed with the project steering committee and the outcomes integrated into the project approach and project reports. The issues trail is attached as Table 6. Individual comments received are listed in Table 7 appended to this document.

### 3.3 Stakeholder consultation, public meetings and comments: stakeholder engagements #3

The third stakeholder engagement process focussed on the proposed coastal management/set-back line(s) and associated development management scheme. Initially (January), a draft report was made available to the public for comment, where after a second draft and draft coastal management/set-back line(s) were released for comment.

#### 3.3.1 Notification via e-mails

All stakeholders on the database were e-mailed a notification of the public workshops and where to find information on the project.

All relevant authorities, including all three spheres of government, were notified via e-mail. Consultation with and the buy-in of the five affected Local Municipalities was deemed critical to the success of the project and was therefore actively sought.

#### 3.3.2 Advertising

I&APs on the stakeholder database, affected landowners, as well as the general public were notified of the availability of updated information and public meetings via a public advertisement in the Weslander (12 March 2013) and Ons Kontrei (21 March 2014) in two official languages (English and Afrikaans).

All adverts included a further invitation to the public to register as an I&AP, as well as where to find additional information on the project.

#### 3.3.3 Radio Advertisements

Advertisements were placed on Cape Talk and Radio West Coast for a three week period. The days and frequency at which these 30 second advertisements were played are listed in the table below.

**Table 4: Frequency of radio advertisements**

Radio Station	Channel	Mon	Tue	Wed	Thu	Fri	Sat	Sun
<b>MARCH 2014</b>		<b>10-Mar</b>	<b>11-Mar</b>	<b>12-Mar</b>	<b>13-Mar</b>	<b>14-Mar</b>	<b>15-Mar</b>	<b>16-Mar</b>
Cape Talk	19H00-22H00					ONE		
Cape Talk	10H00-14H00						ONE	
Cape Talk	14H00-18H00						ONE	
Radio West Coast	16H00-18H00					ONE		
Radio West Coast	09H00-12H00						TWO	
<b>MARCH 2014</b>		<b>17-Mar</b>	<b>18-Mar</b>	<b>19-Mar</b>	<b>20-Mar</b>	<b>21-Mar</b>	<b>22-Mar</b>	<b>23-Mar</b>
Cape Talk	06H00-09H00		ONE		ONE	ONE		

Radio Station	Channel	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Cape Talk	09H00-12H00	ONE						
Cape Talk	12H00-15H00			ONE				
Cape Talk	15H00-19H00		ONE		ONE	ONE		
Cape Talk	19H00-22H00	ONE	ONE	ONE	ONE	ONE		
Cape Talk	10H00-14H00						ONE	
Cape Talk	14H00-18H00						ONE	
Radio West Coast	06H00-09H00		ONE					
Radio West Coast	09H00-12H00	ONE						
Radio West Coast	12H00-14H00			ONE				
Radio West Coast	14H00-16H00		ONE		ONE			
Radio West Coast	16H00-18H00			ONE		ONE		
Radio West Coast	09H00-12H00						TWO	
<b>MARCH 2014</b>		<b>24-Mar</b>	<b>25-Mar</b>	<b>26-Mar</b>	<b>27-Mar</b>	<b>28-Mar</b>	<b>29-Mar</b>	<b>30-Mar</b>
Cape Talk	06H00-09H00		ONE					
Cape Talk	09H00-12H00	ONE						
Cape Talk	12H00-15H00			ONE				
Cape Talk	15H00-19H00	ONE	ONE	ONE				
Cape Talk	19H00-22H00	ONE	ONE	ONE				
Radio West Coast	06H00-09H00		ONE					
Radio West Coast	09H00-12H00	ONE						
Radio West Coast	12H00-14H00			ONE				
Radio West Coast	14H00-16H00	ONE	ONE					
Radio West Coast	16H00-18H00	ONE		ONE				

### 3.3.4 Distribution of relevant material

The draft project report on the demarcation of the coastal management/set-back lines were made available to all registered I&APs for a comment period of 40 calendar days.

The following information was provided on the WCG website and RHDHV website:

- Draft coastal management/set-back lines
- Hazard Lines generated during the risk modelling process
- Background Information Document (English and Afrikaans)
- Draft Report
- Project summary document (English and Afrikaans)

### 3.3.5 Public meetings

Nine public meetings / workshops were held during this phase. The purpose of these meetings was to:

- Demonstrate the draft coastal management/set-back lines;
- Explain the methodology/approach used to delineate the lines;
- Explain the proposed coastal management scheme adopted for implementation in the Western Cape;
- Obtain comments on the coastal management/set-back lines and delineation criteria;
- Obtain comments on the proposed coastal management scheme; and
- Source suggestions on how the lines and zones can or should be used to manage development.

The towns and venues in which the meetings were held and the respective dates and times are listed in the table below.

**Table 5: Venues of Public Meetings**

Town	Venue	Date / time
<b>Yzerfontein</b>	Municipal Hall, c/o Dolfyn and Buitekantstreet	24 March (11am -13pm)
<b>Saldanha</b>	Dial Rock Hall, Albatross St	24 March (5pm - 7pm)
<b>St Helena Bay</b>	Sandy Point Community Hall, 2 Albatross St, St Helena Bay	25 March (11am – 13pm)
<b>Paternoster</b>	Community Hall, Mosselbank St	25 March (5pm – 7pm)
<b>Velddrif</b>	Community Hall, Church Street	26 March (11am – 13pm)
<b>Elandsbaai</b>	Elands Bay Hotel	26 March (5pm – 7pm)
<b>Lambertsbay</b>	Community Hall, Burrel Street	27 March (11am – 13pm)
<b>Doringbaai</b>	Multipurpose Resource Centre, Church St	27 March (5pm – 7pm)
<b>Langebaan</b>	Thusong Hall,	13 July

Town	Venue	Date / time
	Antonio Sieni St no. 7	(11am – 13pm)

All comments were collated into an issues trail table, discussed with the project steering committee and the outcomes integrated into the final project deliverables. Individual comments received are listed in Table 8 appended to this document.

### **3.4 Stakeholder consultation, review and comments: stakeholder engagement #4**

The final project report and associated coastal management/set-back lines were distributed to registered I&APs for a final 21 calendar day review period between 9 June 2014 and 30 June 2014. This period afforded them the opportunity to view responses to their comments from the project team, view the final setback lines and provide any final comments. Only one additional comment was received, querying how development of undeveloped plots or alterations to existing structures in rural areas will be regulated.

## 4 ANNEXURES

## 4.1 Comments and response: stakeholder engagement #2

Table 6: Issues trail for stakeholder engagement #2

Issue / Topic	Comment	Response
<b>Consultation / project detail</b>	All affected parties need to be convinced that coastal risks are real. The Western Cape Provincial Coastal Committee of which all departments are part of must play a central role.	The PCC has been kept up to date with regards to the progress of this project. Members of the PCC are represented on the Steering Committee for this project. The PCC is also involved in the public participation process.
	This project was required a long time ago as it would have led to better development.	We agree that an initiative of this nature is very important and future development will be informed by this initiative.
	Every town must have a risk analysis as an investment for development. It also gives both the public and authorities access to the same information.	All information generated by the project will be available for use by the authorities responsible for the West Coast district
	Who or what is RHDHV?	RHDHV is an abbreviation for 'Royal HaskoningDHV' which is a consulting engineering firm with a global footprint, and majority shareholding in the Netherlands.  The project is run from the local office in Cape Town.
	Who is the WCG Director / which Directorate is responsible for the project?	The Chief Directorate: Environmental and Land Management, headed by Mr Anthony Barnes, is responsible for the project. The Coastal Management Unit, which falls within this Chief Directorate, manages the project on behalf of the CD.
	Who funded the floodline study?	Floodline studies are typically funded by the Department of Water Affairs, unless required by individual developers, in which case they fund it privately.
	A similar project was launched in 2008 - 2009 – is this the	It is indeed a continuation, following similar application of

Issue / Topic	Comment	Response
	same/continuation?	the methodologies developed in the 2010 study in the Overberg district.
	Can the presentation be made available?	It is available for downloading from the WCG and RHDHV websites
	Some of the questions posed to the public are too complex.	The public engagements are intended as platforms for discussion and explanation of the questions.
	What is the file format of the lines on the website?	The lines are provided in "kml" format which displays in Google Earth™
	Are there guidelines on how the information must be used?	A technical report and summary sheets are provided along with the current information. Further application of the information will similarly be supported by full reports.
	Will the .shp files be available at the end of the project? The .shp file will make it possible for people to display on top of their own imagery.	All information will be made available by the WCG
	Will the distribution be practical, like on a CD or memory stick?	The intention is to disseminate the information via e-mail or web downloads, as well as a final project specific GIS viewer platform that can be run off a DVD.
	Are the Google Earth lines easy to navigate, and will they work on the historical images in Google Earth?	The lines are simple and straightforward even for newcomers to Google Earth and fully compatible with the features in the program.
	Is the project information available in Afrikaans?	Although the technical report is only available in English, summary information is provided in Afrikaans.
	Can the stakeholder list be made available?	All information will be made available by the WCG

Issue / Topic	Comment	Response
	Is the CSIR being consulted, as they have collected info over long period?	All relevant information is considered, and information from the CSIR is used for wave modelling.
	Muller Coetzee from the CSIR – Stellenbosch has done work on set-back lines for a development, and these are nowhere near what this project models. The information should be available from the CSIR.	Different regression models are used to compensate for sea level rise, and it can be argued that the Bruuns rule as applied in this project is the most accurate.
	<p>People that can assist with next engagement in Ebenaezer:</p> <ul style="list-style-type: none"> <li>• Department of Agriculture: Lilian Isaacs</li> <li>• Council of stakeholders for the Restitution land claim: Sylvester Don (084 573 3456)</li> </ul>	Will be taken into account for the next round of engagements
	It would be more appropriate to meet in Paperdorp for the next round of engagements, since the people living in Ebenhaezer would not have much to contribute to this process. André Cloete from Papendorp can assist.	Will be taken into account for the next round of engagements
	A suggestion for an alternative venue for the next round of engagements: the library or the Sea Harvest facilities.	Will be taken into account for the next round of engagements
	The West Coast Coastal Management Plan process stalled and ran out of funds. It was also not received well by the public.	Confirmation has been obtained that this is not the case
	Laaipelek harbour forms part of National Government plans including the Department of Tourism.	Noted
	Public Works is responsible for the harbour area and have appointed Delta VEC to support them in their expansion / development plans.	Noted

Issue / Topic	Comment	Response
	<p>Mott McDonald has been appointed to undertake the Western Cape Coastal Management Programme on behalf of DEADP. We would like to liaise with yourself and them to obtain the latest information for inclusion in our literature review, situation analysis and further development of the CMP.</p> <p>We would appreciate if you could provide us with the relevant contacts at RHDHV, and provide us with any information available thus far.</p>	<p>Information was provided and the Western Cape Government team contact details.</p>
	<p>Can you please send us the information on the coastal management lines for the Swartland Municipal area in a shp. file format.</p> <p>I tried downloading the kmz. file from your website but was not able seeing that the link seems to be broken.</p>	<p>The problem on the website was corrected, and the Stakeholder was contact and requested to download the information from the website.</p>
	<p>How soon before government uses the information?</p>	<p>Information can be used immediately</p>
<b>Definitions</b>	<p>Are set-back and management lines the same?</p> <p>What is the difference between the management line and set-back line? Which will be relevant?</p>	<p>Proposed amendments to the ICM Act will rename coastal set-back lines to coastal management lines to prevent confusion with the set-back lines referred to in the EIA Regulations</p>
	<p>What does GIS mean?</p>	<p>Geographical Information Systems – which are computer programs specifically designed to generate and manipulate spatial information.</p>
	<p>What do the risk lines show/mean?</p> <p>What are the different lines on the maps shown?</p>	<p>Each line shows a different projected risk from coastal inundation and wave driven erosion for different future dates</p>
	<p>The railway line has been there for 40 years, yet the risk</p>	<p>The risk projections are modelled for future, not historic risk,</p>

Issue / Topic	Comment	Response
	line is based on a 20 year horizon. Does this mean the railway should have washed away twice in the 40 years?	and express a likelihood of an event occurring. The risk is therefore a statistical average rather than concrete event prediction.
	Which portion of the shoreline qualifies as the Admiralty Reserve, and how wide is it?	The Admiralty Reserve is sometimes found immediately landward of the HWM, but is not a continuous land parcel varies in size.
	Is the "boundary of estuarine influence" defined according to the definition in the ICMA, and does it include the entire tidal influence?	Correct
	What does a 1:xx description mean – i.e. how often will there be storms? Can 1:20, 1:50 and 1:100 year floods happen in same year? Is a 1:100 year storm bigger than 1:20?	The higher risk storm is less likely to occur, as it is bigger and has a longer return period. For example, the 1:20 yr storm is of a size that has a 5% chance of occurring in any given year, whereas a 1:50 yr storm only has a 2% likelihood.
	What is the "zero" line from where measurements are made? Is mean sea level used as determinant?	Correct
	What is the high water mark, and how is it determined?	The 1:10 year storm run up is used to determine the current HWM, as per the definition in the ICM Act
	Which GIS package is used?	ArcGIS, Google Earth™ and a custom GIS Viewer platform
	Is the National Coastal Committee operational?	Yes
	What is 'Listing Notice 3'?	It refers to the third schedule of the EIA regulations and lists activities that may not occur without obtaining authorisations from the relevant provincial authorities
	Is the risk shown by the modelled lines ultimately just	Correct.

Issue / Topic	Comment	Response
	projections?	
<b>Estuaries</b>	<p>What about the 100 year floodline?</p> <p>For lower areas – would the 100 year flood line not be more accurate?</p> <p>The first steps for these types of analyses should be determination of physical flow.</p>	Floodlines can be used for determining risk within estuaries, but no reliable floodline information has been obtained yet.
	Are there therefore no lines designated for Velddrif?	Velddrif lies on an estuary and risk is therefore determined based on height above sea level
	Have tidal changes in the estuary been allowed for?	The 5m or 10m contour used to project risk is selected as a height that takes this into account
	Is the 5m contour height measured as 'above mean sea level'?	Correct
	<p>The dams in the Berg River would have significantly influenced the flood lines / flooding.</p> <p>Dams in the Berg River catchment also impact on the system – many smaller dams are not getting water anymore – only every 10 years or so.</p>	Hence the ideal would be to obtain accurate floodline determinations for the estuaries.
	A recent assessment of a development proposal for the area next to the Laaiplek harbour behind the factory shows that the 100year floodline comes close to the river at the river mouth.	Will be used to verify the modelling
	Sensitive locations and trends in the Laaiplek/Velddrif area include:	Will be used to verify the modelling

Issue / Topic	Comment	Response
	<ul style="list-style-type: none"> <li>The ox-bow lake in the estuary moves and historic attempts to manage the move have been unsuccessful.</li> <li>The access route to town is under threat which means there is a need to defend access.</li> </ul>	
	Is the 5m contour appropriate to determine risk in lagoons / estuaries?	In the absence of floodline information, a high resolution contour height can be used as proxy indicator. It is argued though that the 5m contour is insufficient and a height of 8-10m is more appropriate.
	There is very little water flowing into Langebaan lagoon from the river draining into it.	Will be used to verify the modelling
	Is the 100m from the bank/hwm measured from the 5m contour line, and does that then function as the management line?	No. The 100m is literally measured from the HWM or bank, and is a trigger used in the EIA regulatory process.
	Set-back lines and risk determination has not been included in the Estuary management Plan for Verlorenvlei.	The information from the project will be made available for inclusion in the plan.
	Environmental Management Plans (EMPs) must use the guidance from the set-back project to align with the Estuary Protocol etc.	The information from the project will be made available for inclusion in the plan.
	The Estuary Management Forum uses the SANBI 5m layer to determine the estuary boundary.	The SANBI layer does not use the same level of topographical resolution as this project, and is therefore a more coarse line.
	Is Langebaan being treated as an estuary?	Correct
	There is no Langebaan Estuary Management Plan yet, partly because the uncertainty about whether Langebaan is an estuary. According to the ICM Act it is	Correct

Issue / Topic	Comment	Response
	<p>an estuary.</p>	
	<p>The definition of “estuaries” creates confusion – one cannot equate Langebaan with the Berg or Olifants estuaries because it is an open bay.</p>	<p>The uncertainty is fully acknowledged, but since the coastal modelling also does not apply fully to Langebaan, it will be considered as an estuary with emphasis placed on sediment movement.</p>
	<p>The study must consider the whole catchment area when determining management guidelines.</p>	<p>To be taken into account during the determination of set-back/management lines and associated guidelines</p>
	<p>Die feit dat daar min of geen lantermyn inligting oor erosie of neerlegging van sand op strande is nie en die feit dat toekomstige stygings in seevlakke projeksies is, maak bogenoemde proses baie ingewikkeld.</p> <p>Daar is ook geweldige verskille in wat gebeur op sekere strande. Die strand tussen Laaipelek en Dwarskersbos is slegs 10 km wyd en daar is sekere plekke waar die strand stabiel is. Daar is plekke waar erosie plaasvind en daar is plekke waar neerlegging plaasvind en die hoogwatermerk seewaarts skuif.</p> <p>By Dwarskersbos het die hoogwatermerk die laaste 25 jr ongeveer 20-25 m seewaarts geskuif en het die duin hoer geword.</p> <p>Ongeveer halfpad tussen Laaipelek en Dwarskersbos het weer erosie plaasgevind,veral gedurende Aug 2012 se erge storm.</p> <p>Die vraag is of bogenoemde proses 'n tendens is en of is dit net deel is van n siklus.</p> <p>As iemand wat hier grootgeword het, weet ek dat erosie</p>	

Issue / Topic	Comment	Response
	<p>oor die jare by sekere plekke plaasvind ,maar dat daar n paar jaar later weer neerlegging plaasvind en omgekeerd.</p> <p>Daar moet ook goed gekyk word of erosie plaasvind as gevolg van seevlakstyging of as gevolg van ander faktore soos byvoorbeeld n 100 jaar storm. So moet ook gekyk word na die mens se invloed op erosie. Ek was toevallig die dag net voor Aug 2012 se storm op die strand waar die ergste erosie plaasgevind het en het opgemerk dat daar geen seegras of bamboes op die strand lê nie. Gewoonlik is dit 'n gebied waar veral gedurende die winter baie seegras en bamboes op die strand voorkom. Weens bekende en onbekende redes was daar nie seegras en bamboes op die strand om dit teen erosie te beskerm tydens die storm nie.</p> <p>Die voorkoms van rooigety en die toestaan van konsessies om uitgespoelde bamboes op te tel veroorsaak dat daar nie bamboes is om die strand tydens storms teen erosie te beskerm nie.</p> <p>Die vernietiging van plantegroei op die hoogwatermerk deur byvoorbeeld voertuie soos die geval tussen Laaipek en Dwarskersbos is juis waar erosie tydens Aug 2012 plaasgevind het.</p> <p>Mensgemaakte strukture het ook 'n invloed op erosie soos die muur van die mond by Laaipek op erosie by Sunset en die ertskaai by Langebaan.</p> <p>Dit is dus baie moeilik om 'n lyn te bepaal as die kort stukkie strand tussen Laaipek en Dwarskersbos verskillende tendense toon. Sal dit nie beter wees om eers</p>	

Issue / Topic	Comment	Response
	<p>n korttermyn terugsetlyn te bepaal en dan hoogwatermerke vir 10- 15 jaar fisies te monitor en dan die inligting te gebruik om medium en lantermyn lyne te bepaal nie? Daar is na my mening nog te min fisiese kennis en te veel aannames om medium en langtermyn lyne te bepaal. Deur nou aannames te maak wat dalk nie reg is nie, kan dalk net paniek by inwoners van kusdorpe en riviermonde veroorsaak. Verkeerde aanbevelings kan ook 'n nadelige effek op die ekonomie van die Wes-Kaap hê as mense bang is om by kusdorpe en riviermondings te koop en eerder na ander provinsies uitwyk.</p>	
	<p>The combination between low air pressure and strong winds drives the sea into the estuary.</p>	<p>Wind and wave direction is used as a primary input for the modelling</p>
<p><b>Management guidelines</b></p>	<p>Attached please find my comments submitted at the Yzerfontein Meeting yesterday, for the record.</p> <p>I believe that it is imperative for these principles to be established and taken up in your recommendations. Not to do so would be a travesty and a setback for socio-economic development and poverty alleviation on the West Coast.</p> <p><i>The following are the comments:</i></p> <p>Setback lines should be guidelines and not absolutes:</p> <ul style="list-style-type: none"> <li>• it would be a serious mistake to determine arbitrary setback lines and to absolutely prohibit development within a certain distance from the HWM</li> <li>• mitigation for development within any setback lines should be allowed</li> </ul>	<p>To be taken into account during the determination of setback/management lines and associated guidelines</p>

Issue / Topic	Comment	Response
	<ul style="list-style-type: none"> <li>the type of development is also relevant e.g. whether permanent or temporary structures are envisaged</li> </ul> <p>Setback lines should be for the protection of the public and of the environment:</p> <ul style="list-style-type: none"> <li>a developer should not be allowed to develop within the area demarcated by a setback line if that is likely to cause damage to the public i.e. later owners of land/buildings</li> <li>similarly such development should not be allowed if it is likely to cause irreparable environmental damage but developers should be allowed to submit mitigation for development within any such setback lines and should be allowed to develop if the facts support their cause</li> </ul> <p>The development lines is computer generated and seems to be mainly based on storms and sea level rise, not on coastline sensitivity with regards to such incidences. The assumptions of the model and how the main drivers feed into the model could not be given (understandably). I would like to see it if possible.</p> <p>The avoidable risks of development will depend on coastline sensitivity to storms and sea level rise. Coastline sensitivity (such as Klei Cliffs) must thus be determined to give the work done full value. I made this input at the workshop.</p> <p>Mining (for mostly diamonds and heavy metals, and some sand) is done along at least 120 km of this coastline (Doring Bay to N-Cape border).</p>	

Issue / Topic	Comment	Response
	<p>This mining is done in the surf-zone, on the beach and up to 10km inland in places.</p> <p>New prospecting may prospect for heavy minerals, phosphate, lime and sand on the pristine areas of this coast between Saldanha and Strandfontein.</p> <p>Will the setback line inform decisions on mining in these areas?</p>	
	<p>What may a person do in the event of a storm – need sand. The regulations must provide answers.</p>	
	<p>The set-back lines should be guidelines and not prohibit development.</p>	
	<p>Mitigation for development should be allowed on the basis of supporting studies.</p>	
	<p>There are differing viewpoints in the community – especially between developers and environmentalists. In the end there can only be one winner over the long term – either the coast is damaged or protected. The question is how to find a balance? Government must take strong stand.</p>	
	<p>It should be a principle that any development 100m from the HWM doing Basic Assessment</p>	
	<p>The potential implications of these lines were noted, banks (for example Standard Bank) won't approve loans for building/development and insurance agencies (for example Mutual &amp; Federal) won't insure properties.</p>	

Issue / Topic	Comment	Response
	Which controls will be put in place, and will the municipalities be responsible?	
	It is important that the proposed risk and management lines inform decisions in respect to this proposed development at the harbour.	
	The project will have an influence on property values by restricting development and thereby influencing municipal rates.	
	What about houses already existing below the 100m EIA line?	
	What about a house seaward of the set-back lines? Or vacant properties where people have the right to develop. What is going to happen?	
	Where a property is located above the HWM and building plans are approved, can the landowner develop at own risk?	
	What happened in the case of Langebaan where houses collapsed into the ocean?	
	Will the Government compensate (pay out) landowners for coastal protection if the risk is very high on a property – i.e. who carries the cost? There is an obligation on government to protect property.	
	The EIA to increase capacity on the iron ore line has commenced.	

Issue / Topic	Comment	Response
	Landowners must be allowed to exercise their development right. It is the owner's own risk to develop and that can be confirmed by endorsements on title deeds. That will not take away existing rights.	
	Development must more responsible.	
	At Franskraal, the coast is nearly completely developed, yet people who want to build a house in-between others have to get EIA authorisation – which leads to delays. Why is it necessary to apply for EIA authorisation? Application of such controls in a developed area doesn't make sense.	
	A better way of making decisions is to allow for local discretion.	
	Discretion does, however, come with a risk of corruption.	
	The intention should always be to protect those portions of the coastline that are not yet developed.	
	There are competent government officials in Paternoster.	
	There must be guidelines to go along with the management line(s) and sufficient explanation.	
	What happens when property erodes? It creates a crisis situation and the landowner should be allowed to do crisis management. They want to defend and even wanted to take legal action. The belief is that insurance will pay for the works. ( <i>Comment from Pieter Badenhorst</i> )	
	How long before something is done? The mandates of Provincial and Local Government overlap, and neither	

Issue / Topic	Comment	Response
	wants to take responsibility. The problem is clear, but there needs to be progress in the short and long term.	
	<p>The concept of a management line was supported because of need to manage the coast taking the number of exceptions into account. Key issues that should be considered when drawing such lines included:</p> <ul style="list-style-type: none"> <li>• Consequences of risk lines on insuring coastal properties.</li> <li>• Ensuring the 50 year flood line was correct</li> <li>• Identifying areas where DEADP were considering taking action against either consultants or developers.</li> </ul>	
	It was noted that risk / coastal erosion issues come to the fore when people suffer damage.	
	A specific landowner voiced his frustration with the erosion on his property, located just north of the Laaiplek harbour mouth, as the erosion had been escalating since 2005, with no action being taken by government, and now needed to be resolved as a matter of urgency. This matter was now considered to be a crisis and the owners reported that they wanted to undertake emergency protection measures, funded by their insurance company, and were considering taking legal action. This process was supported by Pieter Badenhorst.	
	There is also a need to protect infrastructure on properties along the Berg River estuary since pumps and copper are being stolen. R30 000 damage was reported.	
	The question is: what happens to development on the	

Issue / Topic	Comment	Response
	<p>'wrong' side of the risk lines - maybe such houses need to be built on poles?</p>	
	<p>Having vehicles driving in the veld or on the beach is dangerous and should not to be allowed in any case.</p>	
	<p>What happens if a property has approved plans but nothing has been built as yet?</p>	
	<p>Transnet intends to double the capacity of the Sishen-Saldanha railway line but the existing line is already at risk.</p>	
	<p>Authorities make bad decisions and break the rules and no-one checks up on them. The public must play a role in making the authorities comply.</p>	
	<p>Province often appoints incompetent coastal management contractors.</p>	
	<p>The economic benefit argument is flawed – to evaluate development options, the value of the land needs to be considered. Building in the first line was considered to be inappropriate.</p>	
	<p>The illegal development just around Baboon Point has a good setback and adds value to all others.</p>	
	<p>What are the implications for properties that have development approval but have not been built as yet?</p>	
	<p>Salt pans North of Dwarskersbos must be included in the Coastal Protection Zone</p>	

Issue / Topic	Comment	Response
	<p>There are implications for mining activities:</p> <ul style="list-style-type: none"> <li>• Dwarskersbos</li> <li>• North of Elandsbay to Steenfontein farm</li> <li>• North of Lamberts Bay</li> <li>• Banks of the Olifants river</li> </ul>	
	<p>Bird and Frog Atlases can be used to determine sensitivity.</p>	
	<p>Will the lines be included in a zoning scheme?</p>	
	<p>What should be done in respect of the 'railway sleepers' protection used at the beach? Should it be rebuilt every year or should a different action taken?</p>	
	<p>Currently there are prefab houses below the HWM in the risk area.</p>	
	<p>Land owners with existing rights need to be considered and such rights taken into consideration.</p>	
	<p>The lines must be included in the zoning schemes to make town planners take it into account. It should also be included at SDF level. Development can then be considered in conjunction with the zoning scheme and with the necessary EIA investigations.</p>	
	<p>Tourism development must take the risk into account – such as building boardwalk on stilts at Langebaan and Elandsbay. When giving access via boardwalks, such structures can be allowed to wash away from time to time.</p>	
	<p>The road above the Strandfontein beach must be closed,</p>	

Issue / Topic	Comment	Response
	and just the picnic area kept.	
	An application for diamond mining has been submitted to the North of Strandfontein. Mining will impact on the stability of the coast line, and it will take time to stabilize after rehabilitation.	
	The importance of EIAs and specialist reports must be reiterated.	
	The Olifants River Mouth is a very sensitive area, and many people go camping there.	
	Include the Olifants River Mouth – for protection.	
	Applications for the mining of mineral sand have been lodged for the area South of the salt pans (farm 464) and Ebenaezer (farm 269) all the way to Strandfontein.	
	The Olifants River Forum will have the area declared as a protected area. Funding is available for regulating and monitoring related to the plan.	
	<p>Ebenaezer history:</p> <ul style="list-style-type: none"> <li>• There are 153 residents who have been allocated all the rights to the original farms in the river valley in terms of the 2004 outcome of a land claim process. 52 farms, worth R100m, are involved. It is not certain what is going to become of the land once it is purchased by government, but the claimants have indicated they want the land back.</li> <li>• For all intents and purposes Papendorp and</li> </ul>	

Issue / Topic	Comment	Response
	<p>Ebenaezer can be considered one town</p> <ul style="list-style-type: none"> <li>• The plan is to use land reform and tourism development in Papendorp for community development. For this purpose a Development Trust has been established.</li> <li>• Since 2005, the municipality has taken over control.</li> <li>• People generally work at the mines, as teachers or are farmers.</li> <li>• A conflict exists between agriculture and the estuary – the reeds encroach on farmland and the water is brackish etc.</li> </ul>	
	<p>Will there be monitoring done during implementation? Changes over time would be important indicators and would provide valuable insight.</p>	
	<p>The local coastal committee (LCC) has been established, but the concern is that the LCC will collapse if the funding is not forthcoming.</p>	<p>Noted – please contact Royal HaskoningDHV should the committee wish to be on the project stakeholder database</p>
	<p>The Coastal Management Programme for Langebaan is approved, but detail implementation of by-laws is proving to be problematic.</p>	<p>Wind and wave direction is used as a primary input for the modelling</p>
	<p>Conflicts around set-back lines originate from the 'prohibition and restriction' clause in the ICM Act.</p>	
	<p>Planned development retreat is taking place in the UK.</p>	
	<p>It is a problem that authorities still approve development in risk areas.</p>	
	<p>Port Shepstone has railway wash-away problem as well.</p>	

Issue / Topic	Comment	Response
	<p>The Langebaan Rate Payers Association presented recommendations on monitoring to the MEC around 2008 – 2009.</p>	
	<p>Boardwalks are really effective in preventing dune erosion.</p>	
	<p>Adaptation planning has taken place in Walvis Bay (ICLEI)</p>	
	<p>Coastal erosion and risk are inevitable. It is necessary to identify the risk and adapt to it. This will require better EIAs that take the risk into account.</p>	
	<p>Are there implications for someone who wants to develop a property immediately?</p>	
	<p>Will information be available before the damage to the Sunset Beach infrastructure gets too much? (refer to photos and e-mail sent to Tasneem Collins)</p>	
	<p>Who will apply the management lines and guidelines/who is responsible for implementation?</p>	
<b>Modelling</b>	<p>The direction of waves hitting the river mouth could be used to model some risk – e.g. using wave height to determine the risk contour in the estuary.</p>	<p>The 5m or 10m contour used to project risk is selected as a height that takes this into account</p>
	<p>Important Birding Areas (IBAs) must be added as a component of the environmental sensitivities layer.</p>	
	<p>BirdLife South Africa would like to provide comments on the abovementioned project.</p>	
	<p>BirdLife South Africa recognises the need for the</p>	

Issue / Topic	Comment	Response
	<p>delineation of Coastal Set-back lines both as a requirement for sustainable development, and conservation of South Africa's coastline (as determined in the National Environmental Management: Integrated Coastal Management Act 24 of 2008).</p> <p>BirdLife South Africa supports the physical processes modelling which has taken place thus far for the West Coast District. The West Coast District coastal zone contains a number of globally Important Bird and Biodiversity Areas (IBAs), these include:</p> <ul style="list-style-type: none"> <li>• SA 099 Olifants Estuary</li> <li>• SA 100 Bird Island</li> <li>• SA 103 Verlorenvlei</li> <li>• SA 104 Lower Berg River Wetlands</li> <li>• SA 105 West Coast National Park and Saldanha Bay Islands</li> </ul> <p>BirdLife South Africa recognises the significance of estuary sites in the modelling phase and the resulting management plan and would appreciate it if the boundaries of the above IBAs could also be included in the modelling and management plans for the coastal set-back lines. The boundaries for the IBAs can be downloaded from:  <a href="http://www.birdlife.org.za/conservation/iba/documentations/downloads">http://www.birdlife.org.za/conservation/iba/documentations/downloads</a></p> <p>In addition, site descriptions for all of the abovementioned IBAs, including location, bird species and conservation actions be accessed at:  <a href="http://www.birdlife.org.za/conservation/iba/iba-directory">http://www.birdlife.org.za/conservation/iba/iba-directory</a></p>	

Issue / Topic	Comment	Response
	<p>We look forward to interacting with you regarding this project and look forward to hearing back from you.</p> <p>1. <u>Whether the risk modelling is accurate and correct</u></p> <p>I do not think that I am qualified to answer this question. But I would say in all ignorance looking at Elands Bay and Verlorenvlei I would be inclined to go with the 10 meter line:</p> <ul style="list-style-type: none"> <li>i. We know the sea level is rising and</li> <li>ii. We know that we do have rare but real flooding at Verlorenvlei, 1925, 1940, 2008 and right now the water is rising at the Elands Bay roadbridge.</li> </ul> <p>2. <u>Confirmation of historical sediment movement</u></p> <ul style="list-style-type: none"> <li>i. As to the sea sediment I do not live on the coast and cannot comment</li> <li>ii. In respect of Verlorenvlei I attach the Curt Stager report about sedimentation in Verlorenvlei accurate back to 1400</li> </ul> <p>3. <u>Detailed in respect of environmentally sensitive areas and windblown corridors</u></p> <p>The low lying areas around the estuary were under water eons ago as evidenced by the local topography similar to what one can see on the mountains above St James and Kalk Bay in Cape Town. Should or when the level rises again the landscape will adjust, people may not.</p> <p>Even the Mike Taylor shell midden at Mussel Point which is listed as part of Baboon Point Provincial Heritage site, may be affected but one has to ask whether it is realistic to try to protect such a site?</p> <p>4. <u>How the physical process lines can be used to</u></p>	

Issue / Topic	Comment	Response
	<p><u>inform development</u></p> <p>As mentioned at the initial workshop, the implications for local municipalities in respect of approved developments which have not been constructed and future intended developments are massive. Our local municipalities are under resourced in terms of skilled personnel and will have to look lively regarding get out clauses when reviewing building plans or they may have to demand accurate altitude indications on plans which would have to be verified.</p> <p>5. <u>How authorities should use the physical process lines or derived lines for regulatory control of coastal development</u></p> <p>I think this is covered above, except to say every effort must be made using visual media (i.e. movies or simulated videos) to inform the public of something they will not want to know about!</p> <p>6. <u>Criteria that can be applied to developments in terms of how they relate to the identified risk zones</u></p> <p>As above: get out clauses for local municipalities and stringent noting of altitudes on plans submitted. A recent dispute development goes to show that consultants are not above being economical with the truth to suit their client.</p>	
	Is storm modelling locally determined?	Local parameters and information are used for the modelling
	Can short term storm beach retreat be explained a bit	Short term beach retreat refers to temporary erosion of beaches during storm events or storm seasons (winter)

Issue / Topic	Comment	Response
	more?	that is reversed naturally within a short period (e.g. up to 1 year)
	Are there areas where accretion takes place? E.g. St Helena. It must be taken into account.	Few locations seem to accrete, and usually reflect the effect of artificial structures on sediment transport. Most of the coastline is eroding.
	Are currents taken into account?	Currents are considered from a sediment transport perspective.
	Are "other" factors such as development of the ore jetty in Saldanha also taken into account?	Such factors are used to determine impacts on sediment transport or where relevant on wave dynamics.
	How reliable are the risk projections? Can a report be made available.	The projections reflect the most recent scientific consensus on coastal risk modelling. A technical report has been made available, and the project team can be contacted directly for more information. The final project report will contain details of the modelling used as well as all assumptions.
	What level of SLR is considered?	Three time horizons are used – 20, 50 and 100 years - which equates to 20, 50 and 100cm of sea level rise
	What assumptions are made?	Parameters that are used include: <ul style="list-style-type: none"> <li>- Estimations of sea level rise</li> <li>- 17% wave height increase due to climate change</li> <li>- No erodibility assumed for rocky shores</li> <li>- Uniform erodibility assumed for sandy shores</li> </ul>
	Why is topography not used to delineate the final risk lines?	The final risk lines indicate a distance from the current water's edge rather than a specific point on the landscape, since the future landscape will look different. If feasible, the risk lines will be projected onto the current

Issue / Topic	Comment	Response
		surface.
	Because of recent development, floodline modelling must be based on current conditions, not historical trends.	Should floodline information be available, it will be used.
	Dr. Mather is not a specialist for the Western Cape, and therefore the work needs to be peer reviewed by local experts.	Dr. Mather is recognised as a leader in the field of coastal risk modelling, and the project methods are based on those found in peer reviewed scientific publications. Formal peer review for this project is therefore unnecessary. Transparent stakeholder engagement is considered to offer adequate opportunity for interrogation of the methods and results.
	Much of the Netherlands is located under the Low Water Mark, so they understand risk and risk projections. The project's modelling can therefore be trusted.	The project methods are based on those found in peer reviewed scientific publications and are the best available science.
	Risk modelling is required because the bay is void of information.	This project models risk for the coastline, with flood heights used for estuaries (including Langebaan)
	The scientific fraternity should be trusted. For example, in Bot River septic tanks flooded because the developer ignored advice on where to build his house. He did not understand basic engineering principles. This then taints the engineering fraternity.	The project methods are based on those found in peer reviewed scientific publications and are the best available science.
	What about coastal variability and local factors such as kelp beds?	Local information is used to determine the wave run up modelling
	What about modelling for Springwalk, Paradise Beach etc.?	Wave modelling will not be done for the Langebaan lagoon as it is too inaccurate. Instead it will be considered as an estuary with emphasis placed on sediment movement.

Issue / Topic	Comment	Response
	<p>Where was the wave heights measured?</p> <p>Where is the wave rider buoy?</p> <p>Where are the offshore measuring points?</p>	<p>Three wave data buoys were considered – Wave Riders at Cape Point and Saldanha, and a virtual Wave Watch III buoy in the middle of the study area</p>
	<p>Is topography (vertical difference/height) taken into account?</p> <p>It is important to take topography into account.</p> <p>Topography has a big influence on the risk lines and must therefore be considered.</p>	<p>Lidar imagery is used to generate a high resolution digital elevation model (topographical surface) on which to model the risk projections.</p>
	<p>Why are there no lines on rocky areas?</p>	<p>Rocky areas are assumed to not erode, and hence there will be no future retreat. Only the overtopping from storms is therefore shown.</p>
	<p>The lines do not seem to reflect storm events run-up.</p>	<p>Storm event wave heights are used as a primary input.</p>
	<p>The lines need to be very accurate in urban areas.</p>	<p>High resolution topographical information is used for the modelling.</p>
	<p>Does the modelling include bathymetry?</p> <p>The bathymetry offshore is very flat with the land rises steeply on shore.</p>	<p>Bathymetry and topography are used as a primary inputs.</p>
	<p>Are the storm wave records only for a 15 years period?</p>	<p>Correct</p>
	<p>Is there need to take cognisance of geological features? The presence of a fault line will surely imply more risk? There is such a fault running through Sandy Point harbour –</p>	<p>The freak events related to earth movements, tsunamis and the like cannot be equated to an 'average' storm risk as modelled for this study and are therefore not</p>

Issue / Topic	Comment	Response
	St Helena Bay.	included.
	Many factors influence floods – including fronts, springtide and other factors, and air pressure should be added as it impacts on the level of the ocean and river.	Sea level and extreme wave heights are used as primary inputs for the modelling
	<p>The project is based on a data set collected during a stable climate situation. This will make short term effects from short term events disturb the database.</p> <p>The erosion/accretion trends work in cycles – short and long. Where these overlap or coincide, i.e. 7 years cycle with 20 years cycle, more pronounced effects will be present.</p>	The risk modelling is done on a timescale that relates to the historic data sets as well as well understood climate change projections, and therefore will not be skewed towards unrealistic long term trends or short term variability.
	The threats are related to the North Wester (storms), low pressure and sea level rise.	Sea level rise and wave direction are used as primary inputs for the modelling
	<p>The problem is a 'perfect' storm when all factors coincide.</p> <p>Spring tide is big issue, especially in combination with other factors such as return flow of flood water that cause damage.</p>	The risk projections simulate such conditions.
	Wind driven waves causes damage, not offshore swells.	The risk projections use a SWAN mathematical model to estimate the wave run up onto the shoreline as determined by the combination of offshore wave heights and inshore bathymetry.
	South African Vulnerability Atlas includes climate change projections for 2100 that are not as drastic as this project suggests.	The sea level rise estimations used for this study are based on scientifically derived values, and are in line with the SARVA. The risk projections however take into account local erodibility which the SARVA does not account for.

Issue / Topic	Comment	Response
	The sea level rise projection utility in Google Earth, although not very accurate shows severe inundation for the area.	Correct. This project will, however, generate far more accurate projections.
	To make the study meaningful, the CSIR should be asked to participate and a second projection scenario – a worst case – generated in order to get enough information. Two or three scenarios are needed.	Further scenario modelling is unnecessary, since the risk projections are based on fixed values and risk is projected for different time horizon 'scenarios' already.
	Beyond the poles / markers (Dwarskersbos) a different model needs to be applied.	The behind-dune flooding will be considered as part of the process to generate management guidelines
	An additional problem noted was the creation of informal roads in the coastal environment – this was related to wave ingress along such paths.  Flooding runs up streets.	The influence of such flood pathways will be considered for input into the modelling
	There are some misconceptions in South Africa about risk descriptions – examples are found on East/South Coast where factors combine to exceed the 1:100year risk.	An explanation of risk descriptions will be added to the technical reports
	Are the risks linked only to factors that we have no control over? What about human influences, local scale variations etc.?	'Soft' factors will be used to determine coastal management lines and management guidelines
	Surely the short term beach erosion should vary according to local conditions, river run-off etc.	Local information on short term erosion will be used where it is available.
	Aerial photography will show trends in coastal erosion at Langebaan.  The project must use historical images to determine erosion trends or potential – for example, Elandsbaai is	Where available, long term erosion trends will be used for the risk projections

Issue / Topic	Comment	Response
	built on sand.	
	Set-back lines must be determined based on storms, waves etc. They are also very dependant on topography – e.g. rocks are stable, whiles clay cliffs erode (like at Strandfontein). Slippages cannot be rehabilitated as they are inherently unstable. I.e. the physical properties of the coastline must determine the lines.	Information on geological stability will be used as determinant of erodibility in the modelling
	Where are the storms coming from – the West? What about the sandy point at St Helena Bay where the storms come from north?	Wave direction is used as a primary input for the modelling
	Do the 1:20; 1:50 & 1:100 short term run-up lines indicate how far a storm would reach, and does this include the erosion?	Correct – it shows the run up during a storm event and short term erosion, but not long term erosion trends
	Will houses stabilise the land like rocks?	Temporarily, but artificial structures are typically not able to withstand wave attack indefinitely
	Where was the 9.37m max wave height measured?	This was taken from the Wave Watch III virtual buoy in the middle of the study area
	Is the close proximity of the 1:50 and 1:100 year lines at Golden Mile indicative of topography?	The lines would be influenced by both topography and bathymetry
	How is potential future expansion of Transnet factored into the modelling? Especially the expansion of maintenance and dredging? A funnel effect creates waves in the bay that could increase along with port activity, and so impact more on Paradise Beach.	The sediment movement in the bay will be used to determine coastal management lines and associated management guidelines
	Does the study consider ocean temperature rises as well?	Ocean temperature rise is a determinant of sea level rise,

Issue / Topic	Comment	Response
		and hence is factored in.
	Are the demarcated lines accurate?	The lines are determined on the basis of the best available methods and information, and therefore are highly accurate.
	During COP17 A. Mather did a presentation on modelling for coastal set-backs – this project should not be different from other approaches. The presentation highlighted that Google Earth images are inaccurate which undermined the believability of the project.	Correct – Dr. Mather is the technical specialist on this project as well.
	Air Force aerial photography of approaches for Langebaanweg AFB might offer good images.	If available, the images will be scrutinised for relevance
	A floodline study was done for the Verlorenvlei ( <i>Comment from Jimmy Walsh</i> ).	If the information is available it will be used for the risk projections
	The EIA for Transnet's expansion proposals done by the CSIR compared Saldanha bay to Richards bay but they are not comparable.	Such comparisons will not be used for this study
	CSIR modelling is available from the HOA, and it would be useful to compare that to the WSP line.	Where information is available, the comparisons are indeed made to verify that the risk projections are correct and realistic
	One cannot use prehistoric data to plan with, as responses will then not be in time.	Only historic climate and erosion trends are used, and therefore are relevant to the study time horizons
	Projections of climate change suggest that the concentration of rain events will be higher although the overall amount will drop. This implies a lot more damage per event.	This can be used to determine coastal management lines and associated management guidelines

Issue / Topic	Comment	Response
	Use modelling – engineers need to identify risks.	The project methods are based on those found in peer reviewed scientific publications and are the best available science.
<b>Other</b>	As long as iron ore dust is present, oil and gas maintenance will not take off in Saldanha.	The risk projections might add value to decision-making related to the port activities.
	<p>Alan Carnegie proposes putting out a breakwater at Bruinpunt in the Doringbaai area to host a new iron ore terminal. Detached breakwaters will be connected to an enclosed storage area and the railway line via a conveyer belt similar to Esperanza in Australia. This has been proposed to Transnet as the residents of Saldanha Bay are sick of the dust from the current terminal.</p> <p>Suggestion to move the ore port to Doringbaai.</p>	The risk projections, management lines and management guidelines might add value to the proposal and subsequent decision making.
	A course in environmental risk assessment was developed in 1949 at the Free State University. However, the promoters of the idea failed to convince any City Councils to show interest.	Noted with interest
	Was there an EIA for the gabion protection at the railway line? Lots of excavation is taking place.	The CMU has sought information from the National Department of Environmental Affairs as to whether an EIA was required and if it was authorized for the gabion structures north of Elandsbay. The National Department is dealing with this matter.
<b>Regulatory</b>	The process seems to redefine the HWM – has there been a debate about what it does to properties that extend to the HWM?	The project bases the determination of the HWM on the definition found in the ICM Act. The Act also determines how the HWM influences property boundaries.
	The set-backs prohibition clause in the Act is quite dramatic – especially in relation to valuable coastal	Coastal management lines and associated management guidelines do not need to include prohibitions. It is simply

Issue / Topic	Comment	Response
	assets.	one of the mechanisms that the ICM Act makes provision for.
	There are too many planning processes taking place and too many regulatory changes.	The uncertainty created by the various regulatory processes is acknowledged, and the project will attempt to reduce the overlapping mandates and uncertainty.
	The use of guidelines is in the hand of government and based on what is allowed within the ambit of the law.	Correct
	There are problems resulting from the overlapping responsibilities of various National Government Departments.	The uncertainty created by the various regulatory processes is acknowledged, and the project will attempt to reduce the overlapping mandates and uncertainty.
	If a building larger than 50m <sup>2</sup> is outside the EIA trigger lines, does it require an authorisation?	Only if it triggers other thresholds. Refer to the EIA regulations for more detail.
	Does the 1km definition/trigger relate to the EIA regulations?	It is used as a trigger for certain EIA regulatory processes, but also to determine the area included in the coastal zone according to the ICM Act
	The act says the MEC "may" not "must" determine setbacks and also allow for management through a zoning scheme.	This will be considered as a possible means of practically applying the risk projects and management lines
	Ek is ook van mening dat die vereiste dat sekere aktiwiteite binne 1km van hoogwatermerk in landelike gebied n EIA benodig op meriete hanteer moet word. Dit is na my mening nie nodig vir die eienaar van 'n plaas waarvan die werf binne 1 km van die kus af is nie om 'n EIA te doen as hy 'n stoor of bestuurdershuis wil bou en daar is ooglopend geen rede waarom dit nie veilig is en dit nie nadelig is vir die omgewing nie.	

Issue / Topic	Comment	Response						
	<p>Were the following comments taken into consideration within the SDP and in terms of public access to the coast?</p> <ul style="list-style-type: none"> <li>• If a private land owner point blank refuses any access to the coast what stand does government have?</li> <li>• Is there any law pertaining that on your borderline between farms there can be walking public access?</li> <li>• An example is the case of the drowning of a local fisherman where there was no access to recover the body - could that be used as a case in point to grant access?</li> </ul> <p>Did Donkinbaai not used to be the original landing place/harbour on the coast? From that point of view (cultural and historical) could one request access to the public?</p>	<p>The development of the coastal setback lines is unrelated to the legislation governing coastal access. As we have not been involved in the development of the West Coast Coastal Management Plan I am unable to answer your query in relation to this project. I apologise for not being able to respond better to your query. Perhaps the District will be able to provide you with more information.</p> <p>The coastal setback lines are determined based on risk modelling of the coast line, taking into consideration the dynamic coastal processes such as erosion, sea level rise, sand dune movement, etc. Management guidelines in association with the setback lines are developed together with the relevant authorities to manage and mitigate these risks.</p> <p>I hope that you will continue to be involved in the setback lines project. The commenting period on the draft hazard lines continues until the end of August. You can find additional information on the project here:  <a href="http://www.rhdhv.co.za/pages/services/environmental/current-projects.php">http://www.rhdhv.co.za/pages/services/environmental/current-projects.php</a></p> <p>Please feel free to contact me or Gerard van Weele should you have any comments or queries on the West Coast Coastal Setback Lines project. Our contact details are as follows:</p> <table border="0" data-bbox="1265 1220 2083 1396"> <tr> <td>Tasneem Collins</td> <td>Gerard van Weele</td> </tr> <tr> <td>021 936 7600 (tel)</td> <td>021 936 7600 (tel)</td> </tr> <tr> <td>021 936 7694 (direct)</td> <td>021 936 7693 (direct)</td> </tr> </table>	Tasneem Collins	Gerard van Weele	021 936 7600 (tel)	021 936 7600 (tel)	021 936 7694 (direct)	021 936 7693 (direct)
Tasneem Collins	Gerard van Weele							
021 936 7600 (tel)	021 936 7600 (tel)							
021 936 7694 (direct)	021 936 7693 (direct)							

Issue / Topic	Comment	Response
		021 936 7610 (fax)      021 936 7610 (fax)  <a href="mailto:tasneem.collins@rhdhv.com">tasneem.collins@rhdhv.com</a> <a href="mailto:gerard.vanweele@rhdhv.com">gerard.vanweele@rhdhv.com</a>
<b>Set-back determination</b>	<p>What can be done to establish principles for determination of set-backs and management guidelines?</p> <p>There should be a process of determining criteria on which to base consistent set-backs.</p> <p>Principles for determination of set-backs must be established.</p>	<p>Locally involved authorities will be involved in a process to determine such criteria, which will then be presented to the public along with the management line that it generates.</p>
<b>Local conditions</b>	<p>The channel just outside Laaiplek river/harbour mouth is continually cut by the fishing vessels going through.</p> <p>16 Mile beach changes over time, but alternates between erosion and accretion.</p> <p>Dunes are steeper at Pearl beach.</p> <p>New development immediately North of Yzerfontein on the banks of a pan is opposed by the conservancy.</p> <p>Bokbaai – 16 mile beach is dynamic with a 5/10 year variation of the HWM</p> <p>A participant reported have seen previous predictions which have now changed. He acknowledged that the coast has a cycle of erosion and accretion and that sea level rise was not part of the previous debate.</p> <p>There is concern regarding the demarcation of risk on the</p>	<p>To be considered for refinement of the modelling</p>

Issue / Topic	Comment	Response
	rocky shore at Yzerfontein – Municipal (Info) offices getting inundated today already.	
	Just past Yzerfontein, where there are pans behind the dunes, the risk lines should move in-land and follow topography.	
	Sensitivity is present in Big Bay where SanParks is the custodian.	
	Rocky headlands keep beaches in the area stable.	
	Diaz beach receding.	
	A 15m wave was measured in the 1970's between North and South head.	
	Small bay has a limestone bottom that keeps sand in place.	
	Eastern side of Shelley Point: <ul style="list-style-type: none"> <li>• Inundation has taken place on the Northern end. It gets inundated when waves come from the other side.</li> <li>• Houses on the Southern end are built higher.</li> </ul>	
	Studies from the CSIR determined the Shelley Point development set-back in the 1990's and should be available.	
	It was reported that the coastline originally as far back as red line at Golden Mile implying that modelling was in fact	

Issue / Topic	Comment	Response
	accurate.	
	Seasonal change is evident – erosion to the West and accretion in the South. (St Helena Bay)	
	Waves inundate the back of beach pans in St Helena Bay during storm events levelling the beach in the process, but don't go further inland.	
	Britannia Bay is stable.	
	A floodwave/tsunami hit the St Helena bay harbour in July 2008 following seismic movement at the Orange River. R2m damage resulted.	
	Longville beach is very flat	
	Doctor Reef is a hot spot for stranding of dolphins / whales and is also very flat.	
	It is important to note the rocky shelf in the bay at St Helena.	
	In the estuary, kariba weed is combated with chemical controls. This leaves dead plant material to accumulate and rot, which in turn extends the salt marshes. This contributes to ongoing flooding.	
	There are accounts of flooding reaching the stop street at the entrance to town, but this flooding is from the land side, not necessary from the sea.	
	The area to the left at Paternoster is higher than at the	

Issue / Topic	Comment	Response
	beach.	
	A paleontological study was done in 2008 for the graveyard behind the restaurant/factory at Laaiplek. This study by John Pellar shows a prograding coastline.	
	It is a well-known fact that the coast is accreting at Laaiplek, but receding further north.	
	90° bends in the Berg River mouth must be related to geological features.	
	Many inshore reefs are present along this coastline – all the way to Dwarskersbos – but are not charted.	
	The impacts on the Sunset Beach restaurant are created by the sea wall which disrupted wave processes.	
	St Helena Bay is very shallow and waves battle to come into bay. Only in exceptional cases is swell getting into the bay. Energy is dissipated further out.	
	<p>Development in the last 50 years would have had a significant impact on the flood lines:</p> <ul style="list-style-type: none"> <li>• The new Saldanha harbour</li> <li>• Building of the railway line</li> </ul>	
	General circumstances are mainly affected by the Laaiplek harbour.	
	Wind blows dust from farm lands in the South East out to sea.	

Issue / Topic	Comment	Response
	Winter storms erode sand but in summer the sand returns.	
	Further north of Velddrif, sand dunes proliferate. Because they are exposed, more erosion takes place.	
	There is no sign of a wind-blown sand corridor around Velddrif – dunes are parallel to coast and not moving inland.	
	Wave sizes decrease as you go further up coast.	
	Deeper water is found further north.	
	The August 2012 storm did not do much damage in Laaiplek/Velddrif.	
	At Club Mykonos, the breakwater was designed to be overtopped by a 4.2m swell.	
	High offshore waves run around the peninsula/Shelley Point, then fans out and decrease in height.	
	All along the coastline there are “low” areas behind dunes – often with pans.	
	The line of dunes North of Velddrif is fairly stable.	
	The sea has previously washed into Dwarskersbos.	
	Two ‘high tides’, related to an underwater ‘mud slide’, occurred 5 years ago.	
	In terms of heritage:	

Issue / Topic	Comment	Response
	<ul style="list-style-type: none"> <li>• Not a great deal of investigation has been done. Much of the heritage artefacts have not been uncovered as yet.</li> <li>• Pether – did a paleoarchaeological study in the area.</li> <li>• There are fossil shell 'bars' with Koi and San remains.</li> <li>• Two old lime kilns have been found.</li> <li>• Heritage Western Cape is a relatively new institution.</li> <li>• UCT archaeological unit has an extensive library.</li> </ul>	
	<p>Strandfontein gets protection from a rocky headland and is exceptionally steep.</p>	
	<p>Photo's of where the railway was originally in Elands bay can be made available.</p>	
	<p>The profile of the dunes around Dwarskersbos has become flatter over the past 25 years.</p>	
	<p>Since 1978, the dunes around Dwarskersbos have receded/eroded by 20/25m. This is also shown by the sand covering rocks being washed away and the rocks being exposed by 45cm.</p>	
	<p>There are signs of erosion around Dwarskersbos – three water tanks were placed next to the old fish factory in the 1930's – 5 years ago they did not show above the sand – now they are damaged.</p>	
	<p>In August 1996 a mini tsunami hit the coast.</p>	
	<p>The 1960 tsunami manage to flood over the low dunes and damage houses built on the dune in Dwarskersbos s.</p>	

Issue / Topic	Comment	Response
	The water broke through via roads built perpendicular to the shore.	
	To the South of the Dwarskersbos Lapa the same thing happens – flooding reaches halfway to the main road via existing roads or tracks. There are beacons that can be used to measure the erosion - in the last five years three structures have been exposed and then damaged by water, and now only one is left.	
	The main problem in the Dwarskersbos area is not erosion, but rather the water that runs over the dunes into the roads.	
	Erosion is quite severe at Sugarbay.	
	In respect to the Lapa (near Dwarskersbos) the problem relates to illegal road and access paths. Residents indicate that they have beacons to measure erosion. They also reflected that in the last five years three historical structures that have been exposed and all but one has since been destroyed.	
	In 1942 the beach was 50/60m further from where it is now at the fish factory – recedes by more than 1m/year.	
	The beach at Dwarskersbos is growing.	
	However, near the Berg River the beach has receded in the past 20 years.	
	North of the Dwarskersbos caravan park, the beach is very stable with no long term regression. The beach profile	

Issue / Topic	Comment	Response
	is also steeper and there are rocks, which probably offer protection.	
	In June 2008, the Verlorenvlei rose by 1m overnight due to inland flooding.	
	The Saldanha harbour influences risks along the bay's shoreline.	
	Areas to the North of Strandfontein are considered sensitive.	
	The historical mouth of the Verlorenvlei is further towards town – 10's of thousands of years ago.	
	There are mobile dunes near the railway line to the North where Port Jackson trees were planted to stabilise them.	
	In terms of cultural heritage, the area is rich in back of dune artefacts which must be protected – especially Baboon Point South.	
	Dune fields are in evidence north of Elandsbay.	
	A 1960 earthquake resulted in a sea level 1m above springtide HWM at the St Helena harbour but as it did not involve a storm there was little damage.	
	There are rocks under Strandfontein beach near the caravan park.	
	The current edition of the Weslander newspaper carries an article about erosion damage at Laaiplek.	

Issue / Topic	Comment	Response
	The old jetty in front of Sunset Beach, Laaiplek, also shows the long term beach retreat.	
	The example shown (Elandsbay) seems well armed (protected by a rocky shore) yet the projection of erosion looks quite severe.	
	The Water Quality Trust has been operational for 13 years, so some valuable information might be available from the State of the Bay reports.	
	At Paradise Beach, the receding beach must not be considered as natural erosion. It is due to human activities and is accelerated. The 50 year projection from the WSP study took place in just 7 years.	
	The cycle of erosion/accretion is nothing new in Langebaan.	
	An example of cutting off sand supply is found at Rietbaai – a natural dune area.	
	The study can use Paradise Beach as an example. Wind transported sand transfer is cut off which transforms the area.	

**Table 7: Specific comments received in response to Stakeholder Engagement #2**

Stakeholder / Meeting	Issue / Topic	Comment
<p><b>Jan Briers</b>  <b>DD Environment</b>  <b>10 June 2013, via email</b></p>	<p>Mining</p>	<p>Mining (for mostly diamonds and heavy metals, and some sand) is done along at least 120 km of this coastline (Doring Bay to N-Cape border).  This mining is done in the surf-zone, on the beach and up to 10km inland in places.  New prospecting may prospect for heavy minerals, phosphate, lime and sand on the pristine areas of this coast between Saldanha and Strandfontein.  Will the setback line inform decisions on mining in these areas?  How can I help?</p>
<p><b>Jan Briers</b>  <b>DD Environment</b>  <b>25 July 2013, via email</b></p>	<p>Geology</p>	<p>The development lines is computer generated and seems to be mainly based on storms and sea level rise, not on coastline sensitivity with regards to such incidences. The assumptions of the model and how the main drivers feed into the model could not be given (understandably). I would like to see it if possible.  The avoidable risks of development will depend on coastline sensitivity to storms and sea level rise. Coastline sensitivity (such as klei cliffs) must thus be determined to give the work done full value. I made this input at the workshop.</p>
<p><b>Christelle Du Plessis</b>  <b>Mott McDonald</b>  <b>03 June 2013, via email</b>  <b>26 June 2013, via email</b></p>	<p>Western Cape CMP</p>	<p>Mott McDonald has been appointed to undertake the Western Cape Coastal Management Programme on behalf of DEADP. We would like to liaise with yourself and them to obtain the latest information for inclusion in our literature review, situation analysis and further development of the CMP.  We would appreciate if you could provide us with the relevant contacts at RHDHV, and provide us with any information available thus far.</p>
<p><b>Sakkie de Villiers</b>  <b>09 July 2013, via email</b></p>	<p>Principles for set-backs</p>	<p>Attached please find my comments submitted at the Yzerfontein Meeting yesterday, for the record.  I believe that it is imperative for these principles to be established and taken up in your recommendations. Not to do so would be a travesty and a setback for socio-economic development and poverty alleviation on the West Coast.  The following are the comments:  Setback lines should be guidelines and not absolutes:</p>

Stakeholder / Meeting	Issue / Topic	Comment
		<ul style="list-style-type: none"> <li>• it would be a serious mistake to determine arbitrary setback lines and to absolutely prohibit development within a certain distance from the HWM</li> <li>• mitigation for development within any setback lines should be allowed</li> <li>• the type of development is also relevant e.g. whether permanent or temporary structures are envisaged</li> </ul> <p>Setback lines should be for the protection of the public and of the environment:</p> <ul style="list-style-type: none"> <li>• a developer should not be allowed to develop within the area demarcated by a setback line if that is likely to cause damage to the public i.e. later owners of land/buildings</li> <li>• similarly such development should not be allowed if it is likely to cause irreparable environmental damage</li> <li>• but developers should be allowed to submit mitigation for development within any such setback lines and should be allowed to develop if the facts support their cause</li> </ul>
<b>Herman Olivier</b> <b>Stadsbeplanner /</b> <b>Town Planner</b> <b>Swartland</b> <b>Munisipaliteit /</b> <b>Municipality</b> <b>09 July 2013, via</b> <b>email</b>	GIS info	<p>Can you please send us the information on the coastal management lines for the Swartland Municipal area in a shp. file format.</p> <p>I tried downloading the kmz. file from your website but was not able seeing that the link seems to be broken.</p>
<b>Theunis Smit</b> <b>Dwarskersbos</b> <b>21 July 2013, via</b> <b>email</b>	Variability in Laaipelek and Dwarskersbos	<p>Die feit dat daar min of geen lantermyn inligting oor erosie of neerlegging van sand op strande is nie en die feit dat toekomstige stygings in seevlakke projeksies is, maak bogenoemde proses baie ingewikkeld.</p> <p>Daar is ook geweldige verskille in wat gebeur op sekere strande. Die strand tussen Laaipelek en Dwarskersbos is slegs 10 km wyd en daar is sekere plekke waar die strand stabiel is. Daar is plekke waar erosie plaasvind en daar is plekke waar neerlegging plaasvind en die hoogwatermerk seewaarts skuif.</p> <p>By Dwarskersbos het die hoogwatermerk die laaste 25 jr ongeveer 20-25 m seewaarts</p>

Stakeholder / Meeting	Issue / Topic	Comment
		<p>geskuif en het die duin hoer geword.</p> <p>Ongeveer halfpad tussen Laaiplek en Dwarskersbos het weer erosie plaasgevind,veral gedurende Aug 2012 se erge storm.</p> <p>Die vraag is of bogenoemde proses 'n tendens is en of is dit net deel is van n siklus.</p> <p>As iemand wat hier grootgeword het, weet ek dat erosie oor die jare by sekere plekke plaasvind ,maar dat daar n paar jaar later weer neerlegging plaasvind en omgekeerd.</p> <p>Daar moet ook goed gekyk word of erosie plaasvind as gevolg van seevlakstyging of as gevolg van ander faktore soos byvoorbeeld n 100 jaar storm. So moet ook gekyk word na die mens se invloed op erosie. Ek was toevallig die dag net voor Aug 2012 se storm op die strand waar die ergste erosie plaasgevind het en het opgemerk dat daar geen seegras of bamboes op die strand lê nie. Gewoonlik is dit 'n gebied waar veral gedurende die winter baie seegras en bamboes op die strand voorkom. Weens bekende en onbekende redes was daar nie seegras en bamboes op die strand om dit teen erosie te beskerm tydens die storm nie.</p> <p>Die voorkoms van rooigety en die toestaan van konsessies om uitgespoelde bamboes op te tel veroorsaak dat daar nie bamboes is om die strand tydens storms teen erosie te beskerm nie.</p> <p>Die vernietiging van plantegroei op die hoogwatermerk deur byvoorbeeld voertuie soos die geval tussen Laaiplek en Dwarskersbos is juis waar erosie tydens Aug 2012 plaasgevind het.</p> <p>Mensgemaakte strukture het ook 'n invloed op erosie soos die muur van die mond by Laaiplek op erosie by Sunset en die ertskaai by Langebaan.</p> <p>Dit is dus baie moeilik om 'n lyn te bepaal as die kort stukkie strand tussen Laaiplek en Dwarskersbos verskillende tendense toon. Sal dit nie beter wees om eers n korttermyn terugsetlyn te bepaal en dan hoogwatermerke vir 10- 15 jaar fisies te monitor en dan die inligting te gebruik om medium en lantermyn lyne te bepaal nie? Daar is na my mening nog te min fisiese kennis en te veel aannames om medium en langtermyn lyne te bepaal. Deur nou aannames te maak wat dalk nie reg is nie, kan dalk net paniek by inwoners van kusdorpe en riviermonde veroorsaak. Verkeerde aanbevelings kan ook 'n nadelige effek op die ekonomie van die Wes-Kaap hê as mense bang is om by kusdorpe en riviermondings te koop en eerder na ander provinsies uitwyk.</p>

Stakeholder / Meeting	Issue / Topic	Comment
<b>Theunis Smit</b> <b>Dwarskersbos</b> <b>21 July 2013, via email</b>	EIA	Ek is ook van mening dat die vereiste dat sekere aktiwiteite binne 1km van hoogwatermerk in landelike gebied n EIA benodig op meriete hanteer moet word. Dit is na my mening nie nodig vir die eenaar van 'n plaas waarvan die werf binne 1 km van die kus af is nie om 'n EIA te doen as hy 'n stoor of bestuurdershuis wil bou en daar is ooglopend geen rede waarom dit nie veilig is en dit nie nadelig is vir die omgewing nie.
<b>Suzanne du Plessis</b> <b>Olifants Estuary Management Forum</b> <b>24 July 2013, via email</b>	Coastal access	Were the following comments taken into consideration within the SDP and in terms of public access to the coast? <ul style="list-style-type: none"> <li>• If a private land owner point blank refuses any access to the coast what stand does government have?</li> <li>• Is there any law pertaining that on your borderline between farms there can be walking public access?</li> <li>• An example is the case of the drowning of a local fisherman where there was no access to recover the body - could that be used as a case in point to grant access?</li> <li>• Did Donkinbaai not used to be the original landing place/harbour on the coast? From that point of view (cultural and historical) could one request access to the public?</li> </ul>
<b>Felicity Strange</b> <b>Chairman</b> <b>Verlorenvlei Estuary Management FORUM</b> <b>22 August 2013, via email</b>	Climate change and coastal setback consultation process	<ol style="list-style-type: none"> <li>1. Whether the risk modelling is accurate and correct            I do not think that I am qualified to answer this question. But I would say in all ignorance looking at Elands Bay and Verlorenvlei I would be inclined to go with the 10 meter line:           <ol style="list-style-type: none"> <li>i. We know the sea level is rising and</li> <li>ii. We know that we do have rare but real flooding at Verlorenvlei, 1925, 1940, 2008 and right now the water is rising at the Elands Bay roadbridge.</li> </ol> </li> <li>2. Confirmation of historical sediment movement           <ol style="list-style-type: none"> <li>i. As to the sea sediment I do not live on the coast and cannot comment</li> <li>ii. In respect of Verlorenvlei I attach the Curt Stager report about sedimentation in Verlorenvlei accurate back to 1400</li> </ol> </li> <li>3. Detailed in respect of environmentally sensitive areas and windblown corridors            The low lying areas around the estuary were under water eons ago as evidenced by the local topography similar to what one can see on the mountains above St James and         </li> </ol>

Stakeholder / Meeting	Issue / Topic	Comment
		<p>Kalk Bay in Cape Town. Should or when the level rises again the landscape will adjust, people may not.</p> <p>Even the Mike Taylor shell midden at Mussel Point which is listed as part of Baboon Point Provincial Heritage site, may be affected but one has to ask whether it is realistic to try to protect such a site?</p> <p>4. How the physical process lines can be used to inform development</p> <p>As mentioned at the initial workshop, the implications for local municipalities in respect of approved developments which have not been constructed and future intended developments are massive. Our local municipalities are under resourced in terms of skilled personnel and will have to look lively regarding get out clauses when reviewing building plans or they may have to demand accurate altitude indications on plans which would have to be verified.</p> <p>5. How authorities should use the physical process lines or derived lines for regulatory control of coastal development</p> <p>I think this is covered above, except to say every effort must be made using visual media (i.e. movies or simulated videos) to inform the public of something they will not want to know about!</p> <p>6. Criteria that can be applied to developments in terms of how they relate to the identified risk zones</p> <p>As above: get out clauses for local municipalities and stringent noting of altitudes on plans submitted. A recent dispute development goes to show that consultants are not above being economical with the truth to suit their client.</p>
<p><b>Carolyn Ah Shene-Verdoorn</b>  <b>Policy and Advocacy Manager, BirdLife South Africa</b>  <b>29 August 2013, via email</b></p>	<p>Demarcation of coastal set-back lines in the West Coast District: Modelling of Coastal Risk areas – Provision of information</p>	<p>BirdLife South Africa would like to provide comments on the abovementioned project. BirdLife South Africa recognises the need for the delineation of Coastal Set-back lines both as a requirement for sustainable development, and conservation of South Africa's coastline (as determined in the National Environmental Management: Integrated Coastal Management Act 24 of 2008).</p> <p>BirdLife South Africa supports the physical processes modelling which has taken place thus far for the West Coast District. The West Coast District coastal zone contains a number of globally Important Bird and Biodiversity Areas (IBAs), these include:</p>

Stakeholder / Meeting	Issue / Topic	Comment
		<ul style="list-style-type: none"> <li>• SA 099 Olifants Estuary</li> <li>• SA 100 Bird Island</li> <li>• SA 103 Verlorenvlei</li> <li>• SA 104 Lower Berg River Wetlands</li> <li>• SA 105 West Coast National Park and Saldanha Bay Islands</li> </ul> <p>BirdLife South Africa recognises the significance of estuary sites in the modelling phase and the resulting management plan and would appreciate it if the boundaries of the above IBAs could also be included in the modelling and management plans for the coastal set-back lines. The boundaries for the IBAs can be downloaded from:  <a href="http://www.birdlife.org.za/conservation/iba/documentationdownloads">http://www.birdlife.org.za/conservation/iba/documentationdownloads</a></p> <p>In addition, site descriptions for all of the abovementioned IBAs, including location, bird species and conservation actions be accessed at:  <a href="http://www.birdlife.org.za/conservation/iba/iba-directory">http://www.birdlife.org.za/conservation/iba/iba-directory</a></p> <p>We look forward to interacting with you regarding this project and look forward to hearing back from you.</p>

## 4.2 Comments and Responses: Stakeholder Engagement # 3

Table 8: Issues trail for Stakeholder Engagement #3

Topic / Theme	Comment / Question	Response
<b>Alignment</b>	In an urban environment context, of the coastal public area is private, where would the coastal setback line be?	At the lowest property boundary
	Confusion over 5m contour line.	The contour is topographical – i.e. all locations with the same height above mean sea level
	Where is the HWM?	The HWM was determined according to the specification in the ICM Act, – i.e. delineated on the basis of a 1 in 10 year storm event.
	Are illegal plots of land in development islands?	No, only legal, lawful developments and properties with existing development rights were considered in developing the CML and development islands.
	What about inland events? Where is CM line between estuary and coast?	Manually drawn joins between the height contours and the coastal risk lines were used – these are based on what is considered the most reasonable or straightforward approach
	Exclusion of harbours – is it the case for all – the Transnet and small fishing harbours	The CML has been delineated on the water's side of fishing harbours and the Transnet Ports.
	Estuarine lines – is the 5m contour a risk line?	Indeed. The 5m contour is used to demarcate risk, and is also the management line. I.e. no development should occur below the 5m estuarine contour. However, where existing development and development rights are present in urban areas, the CML will be delineated on the water's side of the properties. Rural developments such as farm infrastructure will not be affected.
	What is the threshold for distance from coast to estuary	The 5m contour applies along the entire estuary length

Topic / Theme	Comment / Question	Response
	for estuary zoning?	as per the definition of estuaries in the ICM Act.
	Locals don't build below the large stones on the banks of the estuary, as this was considered as the flood line. Only 1 house below this line.	Local knowledge such as this was used to verify the use of a 5m height contour as proxy indicator of risk.
	What kind of anomalies are present with regards to the Velddrif map viewer?	Some final edits are still required to complete the GIS mapping, such as showing the differentiated risk zones for the whole urban/developed area.
<b>Approach</b>	The coastal management lines approach is wrong and that principles should be established which the Authority can implement.	Such principles were used to draft the SBL. The principles and approach applied by the Department is based on the integration of scientific, ecological and socially based criteria. Such approach has been refined and morphed based on challenges that were experienced with previous projects. We are confident that the current approach is more holistic and pragmatic.
	Do all lines shown look at 100 year event?	Yes, but other sensitivities and features are also taken into consideration. Further detail is provided in the project report.
	In some prime development areas – the area if you look at it now is at no risk, the area is well vegetated.	Indeed – the risk zones and set-back line is based on a future projection of where the HWM (vegetation line) will be
	What is a development island?	Development islands were applied mostly in rural areas to indicate existing development as well as areas with existing development rights that is located within the risk area or seaward of the coastal management line.
	These lines are not based on reports produced for private landowners, they are not specific.	Correct – but for consistency, a higher level approach must be taken, and the best quality information is used – often this includes site specific information from national databases, e.g. LiDAR, wetlands habitats etc. that is used in studies for individual properties as well.

Topic / Theme	Comment / Question	Response
	Why haven't a number of the properties up the estuary been islanded?	Because of the level of uncertainty with regards to the demarcation of risk and development zones, it is proposed that specific development footprints in rural areas not be specified, but rather allowed to proceed under the control of existing regulatory frameworks. New development is to be controlled though.
	ICMA – Does this also exclude smaller harbours?	ICMA applies to all harbours (see Section 7(h)(iii))
	In areas where dunes are high, how does this get included?	<p>These would either be sensitive areas so the line would be landward, or the Bruuns Rule applies to determine the impact of erosion over time.</p> <p>What it means for our projections of risk, and the delineation of management lines, is that the lines we have drawn should not be equated to the HWM. To visualise the HWM, one has to take the projected risk line and imagine an angled line through the beach profile (e.g.45 degrees down to the water) with the HWM being at the intersection with the future sea level. A structure sitting atop a 15m dune can therefore be affected by erosion (the landward movement of the entire dune face) much sooner than a structure at 5m elevation.</p>
	What is being used for HWM in the area? What about storm surge?	The 1:10 year line is used as the existing HWM for modelling – as per the definition of the HWM in the ICM Act. According to current definition, storm surge is not included.
	Have we done this outside the Western Cape?	The Western Cape is currently leading the process, but similar projects are underway in other coastal provinces. Additionally, DEA is in the process of developing norms and standards to guide coastal provinces with delineating CML's. The Western Cape process has largely contributed to this initiative.

Topic / Theme	Comment / Question	Response
	100m in urban area set back – what guided this measure?	The approach was taken to keep the CPZ at a minimum of 100m from the HWM in urban areas, as is currently the default specified in ICMA.
	Sea level rise – is it conservative enough?	It is in line with international standards and local projections, but is possibly not as conservative as it could be.
	Explain the concept of a development island – “poor buggers will get washed away”	It is when a plot is seaward of the set back line, but it is an existing or proposed development. The current project will not ‘wish away’ such existing rights, just acknowledge them. The development island acknowledges the existing rights, informs the owners of the risk involved in developing in that area and includes a suite of management controls that may reduce risk of development in that area to a certain degree.
	Pathways should not be oriented in to prevailing wind, can see the impact it's having on sand erosion	Agreed. The authorities will need to consider this, and similar aspects when deciding on development in the CPZ. This is a valid point that should be made when authorities are developing coastal access strips.
	Estuary – can you go through the 10m line?	The question is not clear. However, the 10m contour is the outside boundary of the risk zone and the CPZ. For estuaries the 5m and 10m lines are used as no flood line data is available. In this area, appropriate development controls and the provisions of ICMA will apply to any development. .
	Is the 100m line not a no go zone?	No – just a reference line. It does have implications in terms of the separate EIA process though. It is used to demarcate the CPZ in urban areas and as such certain provisions of the ICM Act must be taken into consideration during the EIA process.
	Certain points should be monitored regularly for an	Indeed – the risk zones and set-back line is based on a

Topic / Theme	Comment / Question	Response
	<p>accurate indication of erosion/ accretion trends. Some areas have high water marks (HWM) where the sea deposits sand and in other areas erosion is present especially around urban areas. Issues will arise where homeowners will state that they have lived in an area for more than 50 years and have not seen the HWM more than maybe 1 metre. Should consider seasons as well as consider the coordinates of where plants started growing. HWM- removes all vegetation.</p>	<p>future projection of where the HWM (vegetation line) will be and long term monitoring will improve the projections. The WCG intends to roll out such a long term monitoring programme.</p>
	<p>Physical processes modelling: The methodology is understood and agreed with and is confident that all coastal processes have been taken into consideration to ascertain risk areas accurately</p>	<p>Noted</p>
	<p>When was LiDAR taken?</p>	<p>Late 2012 / early 2013</p>
	<p>LiDAR does not take into account the sudden rise on sandy shores/dunes</p>	<p>The projections are long term and that take into account sea level rise related erosion, which is then translated into projected risks by applying Bruuns Rule to topographical information</p>
	<p>On 16 mile beach, 200m markers setup on the front dune in 1989. Beach reduced by 3-5m. Re-iterates that topography was not considered using LiDAR</p>	<p>The projections are long term and that take into account sea level rise related erosion, which is then translated into projected risks by applying Bruuns Rule to topographical information</p>
	<p>With regards to the slide on the example of risk projections – it was enquired whether accurate topography has been taken in to consideration. Attendee was not convinced the LiDAR has picked up certain topography</p>	<p>The LiDAR data is quite detailed and can be checked by stakeholders if they require confirmation</p>
	<p>Setback lines should be guidelines and not absolute:</p> <ul style="list-style-type: none"> <li>• it would be a serious mistake to determine</li> </ul>	<p>These comments were received during the stakeholder consultation run in July 2013, and the PGWC's approach to the demarcation of set-back lines is, and how it is</p>

Topic / Theme	Comment / Question	Response
	<p>arbitrary setback lines and to absolutely prohibit development within a certain distance from the HWM</p> <ul style="list-style-type: none"> <li>• mitigation for development within any setback lines should be allowed</li> <li>• the type of development is also relevant e.g. whether permanent or temporary structures are envisaged</li> </ul> <p>Setback lines should be for the protection of the public and of the environment:</p> <ul style="list-style-type: none"> <li>• a developer should not be allowed to develop within the area demarcated by a setback line if that is likely to cause damage to the public i.e. later owners of land/buildings</li> <li>• similarly such development should not be allowed if it is likely to cause irreparable environmental damage</li> <li>• but developers should be allowed to submit mitigation for development within any such setback lines and should be allowed to develop if the facts support their cause</li> </ul>	<p>being applied to the West Coast has taken them into consideration.</p>
	<p>Attendee requested further clarification on the methodology for calculating the lines Bruun's, wave data etc.</p>	<p>TB requested the attendee remain after the presentation to provide more technical detail. Attendee did not remain after the presentation. The technical report is available for further information.</p>
	<p>Have we considered the Tsunami that had taken place a few years ago?</p>	<p>The project focusses only on normal or average variability and long term trends, not once-off extreme</p>

Topic / Theme	Comment / Question	Response
		events.
	Attendee stated that zoning scheme overlay zone best way to address scheme	Noted – hence it being used for the Western Cape as a general approach
<b>Climate change</b>	Climate change is disputed, and historical data that proves that it is taking place was requested.	Anthropogenic climate change is not disputed, and this project is not the forum to challenge scientific fact. International scientific information, such as from the IPCC, can be accessed widely.
<b>Controls</b>	What do we mean by beach nourishment?	It involves dredging of offshore sand and depositing it on a sand island, allowing natural processes to distribute sand and widen the beach
	Technical aspects - how high would homes be along the coast? Would it vary per municipality?	Development controls at this level of detail will not be proposed, as it has to be determined on a case-by-case basis and through engineering design. These controls will be decided upon by the Municipality with the assistance of the WCG. The report contains a generic suite of controls for reference / information purposes.
	Is technical information available in terms of column size, type of materials used considering suggestions are made to put homes on stilts.	Development controls at this level of detail will not be proposed, as it has to be determined on a case-by-case basis and through engineering design.
	Suggestion was made that information regarding the WC Coastal SBL be placed at Municipalities to make land owners and potential purchasers aware of what is required when building and buying property along the west coast.	The information will be used within the local planning schemes – SDF, IDP, Zoning etc. – so all officials and property owners will have access to the information
	Suggestion that the SBL be placed in title deeds	Consideration was given to this concept, but it was deemed ineffective as title deeds are held by the bank until bonds are completely paid off.
<b>EIA</b>	Landowner established his management line and his neighbour has not, should his neighbour still complete an	As long as there is no official amendment to the default EIA management line, or alignment of it with the Coastal

Topic / Theme	Comment / Question	Response
	EIA?	management line, the requirement for EIA authorisations remains. The Coastal Management Line and the risk zones will provide information for decision making.
	Are the principles in the presentation going to relate to the EIA process?	The idea is that the CML should inform refinement of the EIA line or EIA process.
	Will the EIA lines (100m set-back for the urban context and 1km for the rural) and Coastal management lines be named the same thing in future?	The project distinguishes between the EIA set back lines and coastal set back lines stating that they are different and will remain so. In future they may be aligned though.
	What do NEMA and the Coastal Setback Line mean? Does it mean that we have to do separate EIAs for each landowner?	The project distinguishes between the EIA set back lines and coastal set back lines stating that they are different and will remain so. In future they may be aligned though. If applicable, the standard EIA process will be required, but it will be informed by the ICMA requirements and this project.
	If anybody wants to make a change/build on beach they need to do an EIA. Once the lines have been established, would we still need to do a full EIA?	The project distinguishes between the EIA set back lines and coastal set back lines stating that they are different and will remain so. In future they may be aligned though. If applicable, the standard EIA process will be required, but it will be informed by the ICMA requirements and this project.
	Would jetties for factories have to go through EIA processes if there a CM line on these jetties?	The construction of any jetty that triggers the EIA threshold will require an EIA authorisation in addition to any other authorisations that may be required.
<b>Heritage</b>	With reference to p. 20 – 21 of the report – heritage subject mentioned one or two places. Philip Desmond has conducted a Heritage Survey detailing a lot of heritage artefacts not mentioned in the report.	Any further information will be welcomed and included in the project report.
	What Heritage resources have been looked at in terms	The Velddrif heritage association was contacted for

Topic / Theme	Comment / Question	Response
	of Laaiplek? Mentioned that there are many fishermen cottages, early burial grounds, hotels and all are close to river bank.	further information
	Are we liaising with heritage for the Cape?	The SAHRA register for the Western Cape was used for the study
<b>Impact</b>	How does the set-back line affect development in rural areas?	In most cases the areas seaward of the set back line cannot be developed due to risks and sensitivities. The coastal protection zone (CPZ) is, however, taken into account as a general informant – it does not say that no development can take place, just that there is a need to carry out studies to confirm the compatibility of the development with the risks and sensitivities present.
	Are the setback lines prohibitive to development?	Generally, development will be prohibited seaward of the line, but decisions will be informed by the nature of development and the risks faced.
	What if you are seaward of this line?	The zoning of the land/erf and context determines the situation. Generally, new development will be prohibited seaward of the line, but decisions will be informed by the nature of development and the risks faced. Existing development and development rights will be respected.
	With regards to plots that were sold in risk zones, had these SBL been shown, development would not have gone ahead. Now it is stopping entrepreneurial activity.	Individuals who bought into at-risk properties had the same information as authorities and the new lines simply add more definition to the knowledge that the risks have been present all the while. In these areas, the risk overlay zones will be applied to inform implementation of the development controls.
	It must be emphasised that developments seaward of the line can go ahead if all the controls are implemented. This can't stop entrepreneurial activity.	This is built into the approach taken by the Western Cape Government. As long as public risk and liability is limited, informed and reasonable decisions will be

Topic / Theme	Comment / Question	Response
		made.
	5m contour line for estuary – no go? What about existing properties?	Existing development will not be affected, except for future expansion, but new development will need to be informed by the risk projection and development controls.
	Vacant plots behind the CM line – can they still build?	Yes, but will have to adhere to controls related to the associated risk zone.
	With regards to Paternoster, can one apply to build in this area even though it is considered a high risk zone-	Yes, but will have to adhere to controls related to the associated risk zone. Existing rights will be respected.
	Issue of paying more rates to allow people to live near the sea. Concerned if the method to calculating the lines is wrong.	The best available information and scientific process is used for the calculation of lines, and provision made to update and refine the lines as time goes on. Determination of rates can therefore be adjusted accordingly.
	What happens when municipal infrastructure (e.g. Eskom and sewerage systems) gets washed away? Do residents have to pay for repairs through increased rates?	These lines will advise future managed retreat as a way to move infrastructure out of harm's way. The Provincial climate adaptation plan is related to this project, so this will feed into such long term plans.
	From community perspective – economic growth is centred around the harbours, we shouldn't limit development	By nature, certain development has to be associated with the coastal zone and can still be developed close to harbours, but just need to be aware of the risks associated with coastal areas. Development of harbours and economic growth related to the coastal zone is not prohibited. The development however must still adapt/mitigate accordingly.
	If the municipality applies these measures, will it apply to everybody?  Most of front section of St Helena Bay is in a Risk Zone – there is also social housing here, so people who can't	The information applies to all properties and must be taken into account equally for all developments. One of the principles informing this project is limiting risks to human lives, and the information therefore has to inform

Topic / Theme	Comment / Question	Response
	afford to move. Same in Laingville	the location and nature of future development, making it more sustainable. For St Helena Bay, allowing development in the different risk zones would need to be a government decision (local and provincial). All municipalities have access to the information and can therefore make informed decisions.
	Bokkom factories showed as islands-access to these roads need to be addressed as they are in front of the management zone	By nature, certain development has to be associated with the coastal zone and can still be developed close to the water, but just need to be aware of the risks associated with coastal areas. Infrastructure will be considered in terms of the risks and costs related to future management.
	People that invest in property years ago-what will happen to them/their property?	Existing development will not be affected, except for future expansion, but new development will need to be informed by the risk projection and development controls.
	Risk Zone in urban areas-can tourist facilities be placed here?	Yes, but preferably not as public risk and liability for repairs of storm-related damage should be limited.
	Issues about height restrictions of homes on the coast in towns. Neighbours behind, view may be obstructed and will object to development	Views and the right to them is not part of this project, and should be addressed through local building controls and legal precedents.
	Landowners should be made aware of this as they are investing expensive properties only to find out that they cannot develop	The information will be used within the local planning schemes – SDF, IDP, Zoning etc. – so all officials and property owners will have access to the information
	Olifants River mouth – people driving on beach. The forum have put in funding proposal to build a non-permanent walk way. This needs a full EIA which the forum doesn't have funding for. Will the CM lines now affect this further?	The walkway could be treated as an access point, but would require the necessary approvals. The risk projections will inform the placement of such access points and decision-making related to approvals.

Topic / Theme	Comment / Question	Response
	Olifants River mouth – camping facilities. People will want to still be able to access this – cultural thing. Would this still be possible?	Access will depend on the controls put in place by the regulating authorities. It is important to note that the CML relates to buildings/structures and not to activities. Should there be a need for structures such as ablution facilities, the municipality or management agency should be made aware of the risk of building in this area and should locate it in the most appropriate place or implement mitigation to reduce risk.
	Tourism developments – ludicrous to inhibit these developments in rural areas	Existing development will not be affected, except for future expansion, but new development will need to be informed by the risk projection. Provision is made to facilitate these developments if in the interest of the community. The management controls apply whether private or public
	Where existing buildings are can you still develop?	Existing development will not be affected, except for future expansion, but new development will need to be informed by the risk projection
	Property that falls within the risk zone and below the CM line. Paid a lot for land but can't develop on it.	Existing development rights will be respected. The landowner would need to carry out relevant studies to determine what would be appropriate scope for development – as was the case before the determination of the set-back lines.
	If application for construction is in the pipeline for the last ten years, can construction still go forth?	Existing approved and executable rights to develop will not be affected
	Will the state buy over the property if residents are willing to sell property that is in the risk area?	In specific cases where the state has interest in acquiring the property, this might be possible, as are land swaps. This is dependent on the availability of land and funds.
	Nature reserve – road uncontrolled – should be tarred. Need to be careful in terms of spatial planning	Management of nature reserves is controlled through the protected areas act, and management plans.

Topic / Theme	Comment / Question	Response
	As a developer (linear) there is huge concern. Public access to beaches not existent except in the towns.	Public access is one of the issues to be addressed through the broader coastal management plan for the Western Cape and more specifically in the West Coast District Coastal Management Programme.
	What about Rural Areas and future developments there?	Existing legal development will not be affected, except for future expansion, but new development will need to be informed by the risk projection.
	Draw line wherever you want, but no responsible land owner would not want to do a development that would harm the environment in rural areas. Can't say to land owner you cannot develop here. If this was applied years ago, our coastal communities wouldn't be here. Land owner can bring his knowledge of the area to the discussion. Concerned that applications cannot be made in certain areas.	The landowner would need to carry out relevant studies to determine what would be appropriate scope for development – as was the case before the determination of the set-back lines. Evaluations will take place on a case-by-case basis.
	Entire Port Owen has been planned (cadastral)-Houses would need to be put on stilts.	Existing development will not be affected, except for future expansion, but new development will need to be informed by the risk projection.
	How does this relate to mining applications?	Mining applications fall under the Department of Mineral Resources and different legislation.
	These projections are a 'God's send' to the insurers – anyone who lives within this area will have higher rates	The risk projections just confirms the fact that coastal areas have always been at risk – so rates might not even be affected.
<b>Implementation / enforcement</b>	At what stage will the regulations be changed within the municipal planning department?	A process of approving and adopting the lines is still required, and then they can be incorporated into the local planning schemes and building controls. The process of proclaiming model municipal zoning schemes and by-laws is far progressed, and the coastal management scheme will form part of the land use

Topic / Theme	Comment / Question	Response
		scheme.
	With new regulations, there's no environmental officer to oversee all these different schemes in the area. A suggestion that an Environmental Officer oversees all environmental factors for municipalities (E.g. Overstrand / Strandfontein municipality)	The simplest possible scheme will be determined, and municipal officials supported from the Provincial level.
	Are either SBL / CPZ absolute?	They are absolute in terms of current information. If a localised study was to be carried out and better information generated, the lines can be moved.
	Are municipalities aware of the coastal setback lines?	Yes, they have been part of the process from the beginning and the various lines were drawn in conjunction with the municipalities.
	What are the time frames for implementation considering storms?	A process of approving and adopting the lines is still required, and then they can be incorporated into the local planning schemes and building controls.
	How will the coastal setback lines be implemented?	A process of approving and adopting the lines is still required, and then they can be incorporated into the local planning schemes and building controls.
	Does this apply to local municipality as much as local land owners – not much faith in the local municipality with regards to adhering to its own rules and transparency?	Some differentiation is required in drawing the lines, as there are cases where provision is made for coastal public infrastructure. However, the management controls apply whether private or public.
	Can state buy the properties that are within these high risk zones? Who takes on this risk?	In specific cases where the state has interest in acquiring the property, this might be possible. The landowner is responsible for any risk and liability.
	Fully agree with keeping the physical processes modelling and demarcation separate in developed areas to allow for adaptive management as long terms trends emerge, rather than 'constant re-alignment' of	Monitoring and enforcement will be the responsibility of local and provincial authorities, and will need to inform future refinements of the set-backs. This will be one of the

Topic / Theme	Comment / Question	Response
	<p>coastal set-back lines. In order for this to take effect, it is critical that uniform, statistically robust long term monitoring programs on coastal erosion, climate change etc., are implemented on a municipal scale.</p>	<p>recommendations of the project.</p>
	<p>In agreement that the entire hazard zone in rural areas should be a coastal management line to protect against inappropriate and high risk development and keep new ribbon development of coastal areas at a minimum. Regulations for desirable and inappropriate development in the hazard zone should be avoided and should be guided by the coastal management lines to avoid conflict.</p>	<p>Noted – this is the intention of the project.</p>
	<p>The processes on which the coastal set back lines were guided on must be clearly articulated in the different management plans. In order to ensure 'fine grained management' for each specific area (taking into consideration the diverse coastline and usage of the Cape West Coast)</p>	<p>The project report will be as detailed as possible. The CML will be included in the Provincial CMP and must be reflected in the LM and DM CMPs and SDFs.</p>
	<p>Environmental buffers should not only be guided by rising sea level. Coastal belts should incorporate vertical zones to ensure appropriate corridors or green belts in medium and low risk areas where future developments are planned. This is crucial to ensure the integrity of both wildlife and vegetation gene pools and their migratory routes. When sea levels rise, habitat will be lost and alpha, beta and gamma diversity must be given room to adapt to this change. A major concern is that coastal management lines are not applicable in Protected Areas, but is dependent on their management plans. The mandate of SANParks is changing into a profit driven tourism industry and there are currently tourist accommodation developments planned in high risk</p>	<p>Agreed – for this reason, although the set-back lines focus on coastal risk, they also considers other environmental sensitivities like critical biodiversity areas. Management in the protected areas will be informed by the risk projections, but remain subject to the applicable management plan.</p>

Topic / Theme	Comment / Question	Response
	zones. Such actions are already causing conflict and it is advised that a default risk zones be applied.	
	In agreement that a boundary be drawn around 'existing legal development or properties with existing executable development rights to create a limited 'island' of developable area within a larger area of restriction. Such developments however should undergo the normal EIA process.	Agreed, and reflected as such in the project report.
	It is further advised that high risk zones be proclaimed under the Protected Areas Act to ensure sufficient legal protection	Where relevant, the relevant authorities can consider this. Various forms of protection need to be considered though, as informed by the nature of ownership etc. Otherwise, the provisions in ICMA can be considered.
	Funding? Need to identify in IDP- "if it's not in our mandate, sorry we don't have the funds"	This project should serve as proof that the Provincial Government aims to assist other tiers of government in managing the coast responsibly.
	Beaches in Matzikama- on report, beach walls high but walls washed away every winter. Therefore need to be considered in IDP in terms of funding	Correct – but the bigger picture needs to be considered as well – i.e. issues related to how long the costs can be carried, and whether planned retreat is more appropriate
	How can the municipality say we can move line back in some places with no consultation?	The initial alignments were done in consultation with the municipalities, and the current consultations are aimed at involving all other stakeholders. The project included several rounds of stakeholder engagement.
	Suggestion made that municipality uses the viewer as a reference. Same principal used with sewers where citizens can see where they can access water.	The information will be used within the local planning schemes – SDF, IDP, Zoning etc. – so all officials and property owners will have access to the information
<b>Legislation</b>	Have the current set back lines changed in recent legislation?	Nothing has changed, but the ICMA Amendment Bill proposes certain changes such as to change the name of the "Coastal Setback Line" to "Coastal Management

Topic / Theme	Comment / Question	Response
		Line".
	Which legislation is key to the SBL?	The National Environmental Management: Integrated Coastal Management Act
<b>Property rights</b>	Existing rights in urban context are applied, but seems to ignore the rights of landowner in rural areas. What happened to the rights of owners of private land to use land to their best advantage?	Existing development or rights will not be affected, except for future expansion, but new development will need to be informed by the risk projection.
	Do the SBL apply to existing applications / pending ones?	It applies to any land that does not have existing development rights, and will inform the execution of such existing rights.
<b>Specific locations</b>	<ul style="list-style-type: none"> <li>✦ Is the low lying area (salt flat) next to Dwarskersbos picked up?</li> <li>✦ Attendee also mentioned flooding in 1942 that shows a very high risk area, yet can't see why the area east of the farm is at risk? It has never been flooded by the sea.</li> <li>✦ The "Tsunami" of 1969 was mentioned</li> <li>✦ Main flooding is caused by tracks leading to beach (Dwarskersbos)</li> <li>✦ The scale of the development island would have to be reconsidered.</li> </ul>	The salt flats and other wetlands are considered, yes. Development in this area must be considered in relation to current knowledge, unless specific studies can show how the new dynamics shape coastal flooding and wetlands. Extreme once-off events such as tsunamis are not included in the study.
	Why are some of the lines not drawn on the seaward side of the road in terms of future works?	Roads are considered public infrastructure, and this can be found on either side of the line.
	From the Velddrif hotel to factory-restructure high water mark-with a series of gabions. Suggestion that factory owners contact WCG to make an informed decision in terms of development. Example Port Alfred which has	Coastal defences need to follow appropriate processes of consultation and approvals – principles such as consolidated or integrated designs etc. need to be applied. Further detail is provided in the project report.

Topic / Theme	Comment / Question	Response
	done something similar.	
	What about the West Coast National Park?	It is a protected area and has its own management plan - the risk zones will be used to inform the plan and any future planning..
	Dwarskersbos-Open the mouth of the river during summer and close during winter. Should be reconsidered if it is a wetland because no water comes here. Very dry and mainly salty, therefore different plants growing-Port Owen built in the mouth of the wetlands. Water does not come here anymore. Maybe just salt. During winter, the winter storms plus downstream flow from river can cause flooding	The management of the estuary needs to be informed by the dynamics of the ecological system, not development lines.
	Elandsbaai: CPZ at mouth of estuary is not hugging the 10m contour here which it should.	The CPZ also takes into consideration other coastal sensitivities such as mobile dunes.
	Elandsbaai: Looks like the railway bridge was built for the 100 year event. The fish factory in this area is not in a development island neither is the surrounding properties.	Development islands will be added if relevant
	Doringbaai: Statement that public has 40km of coast which they have access to. A suggesting of shifting part of the road and remove instead of moving gabions forward.	Planned retreat and coastal defences need to be planned and executed through the right channels and with the correct authorisation.
	Have we been in contact with the Loubsters who own a large amount of property in the area of Doringbaai?	Notices have been issued to all stakeholders on the database, and via the estuary forum
<b>Stakeholder engagement</b>	How can/does one get a photo on the computer (of the viewer)?	The Viewer is a large application, and has only been distributed to the authorities – RHDHV or the authorities can be contacted for information on specific locations. Alternatively, the same information is available in Google Earth format, which just uses different aerial photography
	Are the municipalities going to have a clear time frame	A note will be incorporated into the Spatial

Topic / Theme	Comment / Question	Response
	to receive all the information, and also to implement the coastal management lines? Things that don't get reminded of regularly, fall through the cracks They don't want to take things like this to council before elections	Development Framework about management controls for the different zones, and timeframes will be confirmed for official MEC adoption of the line at the close of this phase of the project.
	Right direction but difficult for most people to understand. Biggest challenge is not people, but explanation-especially when legislation comes into play. Most important, how to get message across to ordinary man in the street.	The report will be revised to try and improve the readability.
	Municipalities need development to fund infrastructure, and developers need favourable land (i.e. coastal) – hard to get balance and educate locals. Elandsbaai – small community – 2000 people, people don't read newspapers or listen to radios. Everyone has cell phones – sms's may be a better way to communicate it. Need to use the mediums of communication that the everyday man in deprived communities use.	Communication is always difficult, and although SMS notices are useful, it still depends on identifying the correct contact list and obtaining the numbers. The suggestions are noted and will be considered in subsequent communication with the public.
	Advertisement on Namaqualand Radio might be more effective	Noted – will be considered in future. Radio Namaqualand was used in the first round of stakeholder notification.
	Will all comments be incorporated in to report whether we agree or not?	Yes - all comments will be incorporated into a report whether agreed to or not.
	There is no communication – this event is just informing general public what is happening	Grievance is noted, but the public meetings are all held to encourage participation and comments in order to involve affected members of the public.

