ENVIRONMENTAL IMPACT ASSESSMENT (EIA)
EIA: 12/12/20/944

FOR THE PROPOSED ESKOM NUCLEAR POWER STATION AND ASSOCIATED INFRASTRUCTURE

REVISED DRAFT ENVIRONMENTAL IMPACT ASSESSMENT REPORT

MINUTES OF PUBLIC MEETING

PRETORIUS SAAL, GANSBAAI
23 MAY 2011
18:00 - 20:00

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PREFACE

Should participants who attended the meetings require any changes to these proceedings, please notify the Public Participation Office (**n1gansbaai@gibb.co.za**) in writing within 14 days of receipt.

"Unidentified I&APs" refer largely to persons who attended the meeting and verbally raised issues without providing their names. This in no way diminishes the value of the issue raised. Should you recognise your issue and would like to have your name recorded next to it, please advise the Public Participation Office.

In order to provide a structure and to enable the reader to follow the proceedings with ease the minutes have not been captured verbatim and post-meeting notes have been added for clarity and information purposes and are indicated in **bold**.

1. ATTENDANCE

1.1. Attendance – Interested and Affected Parties

- As per attendance register.

1.2 Attendance – Applicant: Eskom Holdings Limited

Name	Position/ Role
Deidre Herbst	Senior Manager: Generation Environmental Management
Tony Stott	Senior Manager: Stakeholder Management
Dave Nicholls	General Manager: Nuclear Engineering
Mervin Theron	Manager: Regulation and Localisation
Lorraine Ndala	Senior Environmental Advisor
Samson Malaka	Senior Advisor: Project Management
Lerato Sedumedi	Senior Advisor: Regulation and Localisation
Mandla Mbusi	Senior Advisor: Stakeholder Management
Beryl Blaeser	Middle Manager: Projects
Mike Gillard	Project Manager: Nuclear-1
Jan Norman	Infrastructure Manager
Gert Greeff	Infrastructure Manager
David West	Corporate Manager

1.3 Attendance – Independent Environmental Consulting Team

Name	Organisation	Role in the EIA
Jaana-Maria Ball	Arcus GIBB (Pty) Ltd	Nuclear-1 EIA: Project Manager
Reuben Heydenrych	Arcus GIBB (Pty) Ltd	Senior Environmental Scientist

2. WELCOME AND INTRODUCTIONS

The independent Chairperson, Dr. David de Waal, welcomed everyone to the meeting. He explained that the presentations were in English but that participants were welcome to use the language of their choice as the EIA Team could communicate in Afrikaans/ Xhosa.

He advised participants that the meeting is being recorded to ensure the accuracy of the minutes and for record-keeping. He further advised the participants that the proceedings would be translated, as and when necessary.

3. CHAIRPERSON'S INTRODUCTORY REMARKS

3.1 Conduct at Meeting

The Chairperson read through the points presented on the slide, which provided guidelines with respect to the conduct of all participants and for achieving a constructive debate and

discussion. These points are contained in the main presentation, which is provided in Appendix 2. He requested all participants to assist the team by having a constructive debate at the meetings.

3.2 Objectives of the Public Review Meetings

The purpose of the Public Meetings is three-fold, *viz*.:

- To present and discuss findings of the various specialist studies undertaken during the Impact Assessment Phase.
- To present the conclusions and recommendations of the Revised Draft Environmental Impact Assessment Report.
- Provide an opportunity to Interested and Affected Parties to comment on the specialist study findings and the outcomes of the EIA.

4. PRESENTATION: FINDINGS ON THE DRAFT ENVIRONMENTAL IMPACT ASSESSMENT REPORT

Ms Jaana-Maria Ball and Mr Reuben Heydenrych representing the Independent Environmental Assessment Practitioners, Arcus GIBB (GIBB), presented the findings on the Revised Draft Environmental Impact Report (EIR).

By way of introduction, Ms Ball, EIA Project Manager, thanked all present for their time and indicated that GIBB is pleased to be at the stage of presenting the findings of the specialist investigations and the outcomes of the Environmental Impact Assessment phase.

Ms Ball and Mr Heydenrych then presented the findings on the Revised Draft EIR (refer to presentation slides provided in Appendix 2).

The issues raised and discussed following Arcus GIBB's presentation are captured in the table presented in Appendix 1.

5. ISSUES AND COMMENTS RAISED AND DISCUSSED

5.1 Issues and Comments raised

The table contained in Appendix 1: "Record of Issues Raised and Discussed" details the issues, comments and concerns, which were raised and discussed at the meeting.

6. WAY FORWARD AND CLOSING REMARKS

6.1 Minutes of Meetings

Ms Ball indicated that the EIA Team would endeavour to distribute the minutes of the meeting to I&APs shortly after the meeting.

Please note should you wish to make any corrections, please advise the GIBB Public Participation Office (**n1gansbaai@gibb.co.za**) within 14 days of receiving these minutes.

6.2 Timeframes

In terms of the timeframes, I&APs were reminded that the public review period of the Draft EIA Report ends on 07 August 2011.

Ms Ball encouraged all present to submit their comments to the GIBB Public Participation Office using one of the following methods:

By mail: GIBB Public Participation Office, Nuclear-1 EIA, P.O. Box 3965, Cape Town, 8000
By phone: 021 469 9180 (Office hours: Mon to Fri – 09:00 to 13:00 excl. public holidays)
By fax: 021 424 5571
By e-mail: nuclear1@gibb.co.za / nuclear-1@gibb.co.za

Comments received on the Revised Draft EIR will be used to produce the Final EIR, which will then be submitted to the Department of Environmental Affairs (DEA) (the decision-making authority for the EIA) for their consideration.

The timeframe for submission of the Final EIR will depend on how long it takes to finalise the report as well as on the quantity and type of comments that are received from I&APs during the review period.

A letter will be sent to all registered I&APs informing them of the Authorities' decision.

6.3 Chairperson's Concluding Remarks

The Chairperson thanked everyone for constructive engagement and encouraged I&APs to submit written comments and closed the meeting.

APPENDIX 1: RECORD OF ISSUES RAISED AND DISCUSSED

Please note: In some instances, the names that were given by the speaker at the meeting did not correspond with the names provided in the attendance register.

GANSBAAI PUBLIC MEETING (23 MAY 2011)			
No	**Name**	**Comment**	**Response**
1	Wilfred Chivell, Dyer Island Conservation Trust	Mr. Chivell asked why the presentation mainly deals with environmental impacts associated with the Thyspunt site, as Gansbaai may be impacted on by the construction of a nuclear power station at the Bantamsklip site. Mr Chivel would like to see a presentation dealing with impacts associated with the Bantamsklip site.	Ms Ball explained that a public meeting was held in Gansbaai in March 2010 during which GIBB presented the findings of the Draft Environmental Impact Report (EIR). Interested and Affected Parties (I&APs) subsequently requested changes to be made to a number of specialist studies and the main environmental report. The key aim of this meeting is thus to present the key changes made to the Report. Most of those changes revolve around the Thyspunt site. This is the preferred site as stated in the Draft EIR and the local communities situated near the Thyspunt site appointed their own specialists to assess the potential impacts of a nuclear power station. The results of those specialist studies has to be evaluated and addressed in the Revised Draft EIR and the relevant specialist studies. There are also changes to the information presented on the potential impact Bantamsklip site, which includes a further review of potential impacts to heritage resources in the area.
2	John Williams, Stanford Conservation Trust	The Bantamsklip site is still being on the list of possible sites for Nuclear-1. Even though the preferred site for Nuclear-1 is Thyspunt, Bantamsklip may still be used as a nuclear site in the future. He wants to know what the status is of the Bantamsklip site.	Ms Ball confirmed that the status of the Bantamsklip site has not changed since the publication of the previous Draft EIR. Thyspunt remains the recommended site for environmental authorisation by the GIBB, subject to a number of conditions. Bantamsklip remains a site that Eskom may consider for the future construction of a nuclear power station. However, this site is not the preferred site for Nuclear-1 by GIBB, The DEA is the decision-making Authority.

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No	**Name**	**Comment**	**Response**
3	John Williams, Standford Conservation Trust	Mr Williams went into detail on the size of present nuclear power stations in countries such as France and Finland. He stated that the 9 600 MW of nuclear generation required by the Integrated Resource Plan (IRP) would result in an additional nine power stations of the size of the Koeberg Nuclear Power Station, having to be constructed. Thus, there are more than three power stations being planned by Eskom. This implies that nuclear power stations would be built on all three sites currently being considered for Nuclear-1. The question is where the other stations will eventually be placed. He wished to confirm if Bantamsklip may be used in future and whether other sites are going to be revisited with a new EIR. He wanted to confirm if this EIA is for single nuclear power station or for six power stations. He further asked whether, assuming the recommendations of the Draft EIR remains the same, but that the Department of Environmental Affairs (DEA) decline the recommendation that Thyspunt be considered for environmental authorisation, if the status of the Bantamsklip site will also remain the same.	Ms Ball stated that some of these questions were answered in the presentation. She confirmed that this EIA is for a single 4 000 MW nuclear power station. (Koeberg Power station is 1800MW, to meet the 9600MW in the IRP 3 power station of 2 - 3 units each would be required.) Should Eskom wish to construct a nuclear power station that exceeds this generation capacity, the utility will have to undertake a new EIA. Thyspunt was the preferred site recommended in the Draft EIR. Nothing has changed in this regard during the revision of the Report, except that new specialist studies have been undertaken to confirm that our assumptions and recommendations are correct. The recommendation still stands that Thyspunt is the recommended site, but with very significant conditions. GIBB had to consider alternatives as required by the National Environmental Management Act (Act 107 of 1998) and the Environmental Impact Assessment Regulations of 2006. GIBB therefore considered five alternative sites for this EIA, and three of these sites were taken forward into the impact assessment phase for further detailed studies. All the specialist studies undertaken for this EIA were focussed on these sites. Ms Ball stated that GIBB cannot pre-empt what the DEA (and the other commenting authorities) may decide, but they will have to examine and take cognisance of the contents of the Revised Draft EIR together with the specialist study findings. The Authority will have to decide whether they agree with the assessment made in the Revised Draft EIR that Thyspunt be considered for environmental authorisation, subject to the conditions provided in the Report. The DEA could disagree with the findings and recommendations in the Report and decide that, for instance, the Duynefontein site is more preferable from an environmental perspective or that none of the sites be

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No	**Name**	**Comment**	**Response**
			authorised. Ms Ball again confirmed that this EIA is only for one nuclear power station of 4 000 MW. The EIA Team, including all the appointed specialists, based their assessments on an envelope of criteria (i.e. the Consistent Dataset included as an appendix in the EIR) and that if any of those assumptions are invalidated then a new EIA process will need to be undertaken or part of the process which would need to be communicated with the public. Ms Ball further stated that GIBB had arranged a series of public meetings to discuss the findings on Revised Draft EIR. The dates and venues of these meetings were provided in advertisements placed in national, regional and local newspapers and letters to registered I&APs, which stated that this presentation at the meetings will focus on the key changes provided in the Revised Draft EIR. In the previous meetings, which Mr Williams attended, the findings of the Draft EIR were discussed.
	Mike Kantey, Coalition Against Nuclear Energy	Mr Kantey stated that this issue was vitally important and that the Government not grant authorisation for a nuclear power station to be constructed on three sites. The Minister, in recent announcements, is talking about one nuclear reactor being built. He further stated that this public meeting is crucial for any legal process that is ongoing with respect to this EIA. He referred to a large amount of money required for the proposed nuclear power station.	Ms Ball stated that Mr Kantey's comments were noted. Ms Ball also asked the Chairperson to take note that the questions had taken time from the allotted presentation time and requested the Chairperson to extend the presentation time allotment.
4	Eugene Henry, Pearly	Mr Henry, representing the Pearly Beach Ratepayers	Mr Heydenrych explained that spoil is sand and rock that was

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No	**Name**	**Comment**	**Response**
	Beach Ratepayers Association	Association (PBRA), asked for a definition of 'spoil' and whether it may be radioactive water waste being pumped into the ocean.	excavated for the construction of the proposed nuclear power station. One of the disposal options considered and recommended in this EIA is to dispose this over-burden material in the ocean. Spoil would be during construction and would not include radioactive waste.
5	Eugene Henry, Pearly Beach Ratepayers Association	With regards to the water required for the cooling of the power rods. Is that retained on site or is it also disposed of on in the ocean?	Mr Heydenrych commented that the water required for the cooling of the power station is taken from the sea and used for once through cooling, it is pumped back into the ocean. This is a closed system. At no point does this water come into contact with the fuel rods or other radioactive material in the power station.
6	Eugene Henry, Pearly Beach Ratepayers Association	Mr Henry wanted to confirm whether the decision taken by the Minister of Energy to provide 9 600 MW for nuclear energy in the Integrated Resource Plant (IRP) was subject to public participation?	Ms Ball answered that the IRP 2010 (Revision 2) was accepted by cabinet in March 2011 and went through an extensive public participation process, which ran through most of 2010. The commenting process was extensively advertised in the media.
7	Eugene Henry, Pearly Beach Ratepayers Association	Mr Henry wished to state that the PBRA was not party to any of those discussions and were not able to provide any input to the IRP.	Ms Ball stated that she cannot speak on behalf of the Government but she is aware that there were advertisements placed in newspapers advertising the process and requesting input from the public. She is also aware that the public participation process was extended and that public hearings were held. Ms Ball requested that Mike Kantey provide more feedback to the participants of the meeting in this regard, as he was intimately involved in the process.
8	Mike Kantey, Coalition Against Nuclear Energy	Mr Kantey, representing the Coalition Against Nuclear Energy (CANE), confirmed that the IRP process was well advertised in national newspapers and was well publicised in the public media. The question is, however, whether the PBRA were consciously approached to participate in the public participation	The comment was noted by all present at the meeting.

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No	**Name**	**Comment**	**Response**
		process for the IRP. It is obvious that the PBRA was not approached. Mr Kantey informed the PBRA that they can reserve their right to participate according the provisions made in the Constitution regarding public participation. With regards to civil society's response to the IRP, Mr Kantey reported that 430 submissions were made. Mr Kantey further stated that the majority (99.9 %) of these submissions were in support of the PBRA's concerns, but is of the opinion that these submissions were ignored by Government.	
	Mr Rob Fryer, Overstrand Conservation Foundation	Mr Fryer, representing the Overstrand Conservation Foundation (OCF), wished to confirm if a separate EIA process will be required for the housing and related infrastructure needed for the 7 700 workers and their dependents who will be involved in the construction process and whether the Environmental Management Plan (EMP) for the power station has addressed this concern.	Mr Heydenrych stated that the principal policy of Eskom is to make use of existing housing in the area where the power station would be built, if authorised, as far as possible. However, if housing is required and Eskom cannot identify an area that is already zoned for residential use, a separate EIA process will be required. Mr Heydenrych confirmed that the impacts associated with housing are not considered in the EIA for the nuclear power station, as it considers only the impacts associated with the power station itself and its immediately associated infrastructure. A separate EIA process for housing may therefore be required in future. The social aspects associated with accommodation have been considered in this EIR.
9	Mr Rob Fryer, Overstrand Conservation Foundation	Mr Fryer stated that this is a major flaw in the EIA process. He asked if there were any investigations made as to whether the area (around the Bantamsklip site) can support 7 700 workers and their dependents.	Mr Heydenrych stated that due to the nature of this EIA, which looks at three alternative sites, Eskom cannot plan to develop such infrastructure if it is not sure which of the sites will be approved for the construction of the power station, if any.

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No	**Name**	**Comment**	**Response**
		He is of the opinion that there is no such infrastructure in area.	However, Eskom has undertaken preliminary discussions with local authorities at the Thyspunt site to identify areas that they consider suitable for the development of housing infrastructure. Eskom also engaged with the local authorities regarding infrastructure around the Bantamsklip site.
10	Mike Kantey, Coalition Against Nuclear Energy	Mr Kantey stated that the question is whether not considering housing in the Nuclear-1 EIA constitutes a fatal flaw. The answer provided by Mr Heydenrych that discussions were held with local authorities near the Thyspunt site is not referred to in the Revised Draft EIR and asked that this be noted.	Mr Heydenrych confirmed that the Nuclear-1 EIA only considers the proposed nuclear power station and its immediate associated infrastructure, and that it does not include housing. If housing were to be required at the Thyspunt site (or any other site) then the associated impacts will be considered in a separate EIA process.
11	Mr Rob Fryer, Overstrand Conservation Foundation	The OCF is of the understanding that the EIA process for the transmission lines for the proposed Bantamsklip power station is to continue, irrespective of the outcome of the EIA for the proposed Nuclear-1 power station. At a previous public meeting for the Bantamsklip transmission lines EIA, a conclusion was made that the appointed specialists would confer and provide a suitable route for the transmission lines to the proposed power station and present their findings to the public. Mr Fryer stated that he conferred with several of the specialists and came to the understanding that there was not a feasible route for the transmission lines. Mr Fryer wanted to confirm what the status of this EIA process is and whether a feasible route has been identified.	Ms Ball stated that she is also the appointed Environmental Assessment Practitioner (EAP) for the Bantamsklip Transmission Lines EIA. She confirmed that this EIA process has been put on hold by Eskom Transmission. The process was halted at the conclusion of the last multi-stakeholder workshops held in Bredasdorp and Worcester, and that feasible routes for the transmission lines had as yet not been identified.

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No	**Name**	**Comment**	**Response**
12	John Williams, Save Bantamsklip and the Stanford Conservation Trust	Mr Williams noted that the Bantamsklip EIA and EIR are fatally flawed because the biodiversity of the area surrounding the Bantamsklip site is of global importance. He further stated that he is of the opinion that there are no mitigation measures to adequately address the potential impacts of the power station on marine and terrestrial ecosystems. The potential impact of spoil and heated water released into the ocean is an important issue and must also be noted.	The comment is noted.
	John Williams, Save Bantamsklip and the Stanford Conservation Trust	Mr Williams asked why no recognition was given to the Buffelsjagsbaai community, which is situated 3 km east of the EIA footprint. The Buffeljagsbaai community is not mentioned in any of the specialist studies or EIA documents and is not shown in any of the maps provided in the Revised Draft EIR. The community is 500 strong 'in the season' and when added to the community of Pearly Beach there are 5000 people living within 7 km of the footprint of the EIA. Mr Williams stated that the Buffeljagsbaai community has not been consulted and asked if the community may have to be relocated.	Ms Ball welcomed the members of the Buffeljagsbaai community to the meeting. She stated that she is aware of the Buffeljagsbaai community and has met with members of this community during the Bantamsklip Transmission Lines EIA public meetings. She confirmed that they are considered within the Nuclear-1 EIA and will confirm whether members of the community are noted within the I&AP database. Ms Ball also confirmed that there are no recommendations to move any of the communities situated within the vicinity of any of the three sites.
13	John Williams, Save Bantamsklip and the Stanford Conservation Trust	Mr Williams wished to again state that the Buffeljagsbaai community has not been placed in any of the maps produced for the Revised Draft EIR. Furthermore, it must be noted that nature reserves have been rezoned over the EIA footprint. These reserves have now been incorporated into the EIA footprint.	The comment was noted. **Post-meeting note:** **Although the Buffeljagsbaai Community is not indicated on any of the maps in the main Revised Draft EIR, the community is mentioned within the Social Impact Assessment Report (Appendix E18), Visual Assessment (Appendix E19), Economic Assessment (Appendix E17) and**

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		Mr Williams stated that this is purposeful deception in terms of mapping and recording existing demographics and land use as no acknowledgement was given to the Buffeljagsbaai community or to the status of Groot Hagelkraal, Soetfontein and Pearly Beach Nature Reserves. The status of the reserves as protected areas must be acknowledged in the EIR.	**Human Health Risk Assessment (Appendix E24). The Economic Assessment specifically acknowledges the Buffeljagsbaai community's dependence on non-commercial fishing.** **The Groot Hagelkraal Farm has been declared as a Natural Heritage Site at Eskom's (landowner) initiative. The Pearly Beach and Soetfontein Nature Reserves are managed by Cape Nature and border the Bantamsklip Site (Groot Hagekraal Farm).**
		Dr De Waal called Mr Williams to order based on personal comments made towards the EAP. Mr Williams' response was that GIBB is ignorant of the facts that he noted.	
13	Dave Whitelaw: Private Landowner and Conservationist	Mr Whitelaw asked whether the outcomes of the Nuclear-1 EIA will be revisited should further EIAs, such as for the construction of housing for workers and their dependents, identify any fatal flaws.	Ms Ball explained that one of the key EIAs that Eskom is also undertaking is for the transmission lines associated with the proposed power station. Authorities have met with both sets of independent consultants, which in the case of the Bantamsklip Transmission Lines EIA is also GIBB. The Authorities will aim to make their decisions in an integrated manner, but due to the different programmes for these EIAs, this may prove difficult. However, the DEA is kept informed of the progress on all the EIAs. GIBB has looked at cumulative impacts and subsequent EIAs that may be undertaken and submitted to the DEA will need to assess cumulative impacts of the proposed power, as well as the proposed development at hand. Ms Ball further stated that the transmission lines EIA serve as a good example. Should the power station receive a position

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No	**Name**	**Comment**	**Response**
			decision but the transmission lines a negatives decision, obviously the proposed project cannot proceed, as a power station needed electricity to be brought into the site and power generated to be evacuated from the site onto the national electricity grid. The same principle applies if the nuclear license and the additional 20 permits required are not granted. All these required authorisations must first be obtained before the power station can be constructed.
14	Dave Whitelaw: Private Landowner and Conservationist	Mr Whitelaw asked whether any of the results on studies done regarding increased flooding and sedimentation was derived from computer modelling or by means of site visits and field research.	Mr Heydenrych explained that computer modelling was used, but that the data was based on research conducted over a number of years to determine in which direction and at what velocities the currents are flowing. This information was therefore obtained based on information obtained in the field and based on computer modelling.
15	Mr Dean James. Gansbaai Sand and Stone	Mr James requested that the aerial photograph of the Bantamsklip site be shown on the projector. Mr James pointed out where his mining company is located and asked if his property may be affected by the development.	The photograph was shown and the mining company depot located.
16	Mr Dean James. Gansbaai Sand and Stone	Mr James asked whether the spoil material could not be transported inland where it can be crushed and reused. By reusing this material, it will also save money.	Mr Heydenrych pointed out that GIBB and the appointed specialists did consider alternative options for disposing of the spoil material. As the spoil will consist of many million cubic meters of material, transporting and disposing of it inland will result in very large heaps of sand and stone. The transport of that sand and stone inland will also result in potential additional impacts. The Revised Draft EIR therefore recommends that the spoil be disposed of in the ocean. Mr Williams can, however, request Eskom if he can make use of the spoil material.

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			Mr Dave Nicholls from Eskom explained that there will be two types of spoil created by construction activities, namely sand and rock. Eskom is of the opinion that alternative means of disposal for this material can be considered on a case by case basis and Eskom could consider providing a portion of the spoil to private concerns.
17	Chris Pretorius, resident of Wolvengat	Mr Pretorius stated that in the initial EIR GIBB stated that a 40 MW power station will be constructed, with an exclusion zone of 8 km in which no person will be allowed to reside. Now that a 4 000 MW station is considered, what is the required exclusion zone?	Mr Heydenrych stated that since the start of the EIA process in 2007, it was stated that a 4 000 MW station is proposed to be constructed. There are two different radii of exclusion zones, namely a 800 m zone in which no development will be allowed and a 3 km zone in which there will be specific restrictions on development. The zones would, however, need to be confirmed by the National Nuclear Regulator and are an assumption to the EIA. Mr Heydenrych confirmed that Eskom owns all the land in the 800 m exclusion zone at all three of the alternative sites.
18	Chris Pretorius, resident of Wolvengat	Mr Pretorius wanted to confirm whether in the original EIR the proposal was for a smaller station but that the subsequent EIR made provision for a larger station.	Mr Heydenrych explained that although the EIA application was for 4 000 MW, Eskom had requested that GIBB investigate whether a 10 000 MW station can be accommodated at any of the three sites. However, the EIA Application is still for a single 4 000 MW nuclear power station.
19	Chris Pretorius, resident of Wolvengat	Mr Pretorius stated that in the original EIR GIBB clearly stated that there will be an 8 km exclusion zone where no residential development will be allowed, then a 12.5 km exclusion zone in which agriculture will be allowed but which will have to be monitored and then a further 16 km in which people will be allowed to reside. So what are the exclusion zones?	Mr Heydenrych stated that there are different exclusions zones for different types of nuclear power stations. The 16 km zone that Mr Pretorius referred to is for the Koeberg Nuclear Power Station, which is an older generation power station. The power station proposed for Nuclear-1 is a Generation III nuclear power station, which has more advanced technology and has different safety zones. So if the proposed power station conforms to criteria in this EIA then the exclusion zones of 800 m and 3 km will apply.
20	Chris Pretorius, resident of	Mr Pretorius asked if the first EIR is therefore	Mr Heydenrych stated again that the initial EIR is correct and

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No	**Name**	**Comment**	**Response**
	Wolvengat	incorrect?	that the Koeberg Nuclear Power Station has larger exclusion zones than the power station proposed for Nuclear-1. He also stated that if Mr Pretorius is willing to stay after the meeting, they can review the maps together to confirm which maps indicate a larger exclusion zone.
21	Chris Pretorius, resident of Wolvengat	Should that a 3 km exclusion zones will be put in place, will the community of Buffeljagsbaai be relocated, considering that they are situated 2.3 km from the site?	Mr. Nicholls explained the emergency planning zones work under the European Utility Regulations. These Regulations state that no person is allowed to reside within 800 m of the site. However, in the case of a nuclear accident, those people residing within 800 m to 3 km from the site, short term relocation of up to 1 month may be required if there was an accident.
22	Mike Kantey, Coalition Against Nuclear Energy	It should be noted that the company undertaking the Pebble Bed Modular Reactor (PBMR) programme requested a 800 m exclusion zone. It was never accepted by the National Nuclear Regulation and is not stipulated in the regulations published under the National Nuclear Regulator Act 47 of 1999 (NNRA). The exclusion zone stipulated in these regulations is for 16 km in which no development is to take place. With regards to the Koeberg Nuclear Power Station, there are disagreements between the City of Cape Town and the Authorities because the City is rapidly expanding in the direction of Koeberg and is not allowed to construct any infrastructure in the Koeberg site as per the NNRA. If Eskom is able to successfully change the Act in their favour by reducing the exclusion zone to 800 m, as per the PBMR literature, then yes perhaps, but if you consider that the	Ms Deidre Herbst from Eskom, confirmed that the exclusion zone for the PBMR was 400 m. It is important to note that there are currently people living within 2 km of the Koeberg Nuclear Power Station. So it is possible for people to live within this exclusion zone, even in the case of Koeberg, which has a larger exclusion zone than the one proposed for Nuclear-1. For this reason, no one will be relocated from any of the proposed sites for the Nuclear-1 power station.

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No	**Name**	**Comment**	**Response**
		exclusion zones put in place by the International Nuclear Atomic Agency (INAA) for Generation III Nuclear technology is way beyond 10 km, the Buffeljagsbaai community will have to be forcibly removed.	
23	Mr Daniel Niemand, resident of Buffeljagsbaai.	Mnr Niemand het genoem dat sy gemeenskap die kelp projek by Buffeljagsbaai van die Staat ontvang het in 2001. Mr. Niemands het genoem dat dit die enigste vorm van werkskepping is in hulle omgewing. Die plasing van die kragstasie gaan hulle affekteer omrede dit ook die area geleë is waar hulle kelp neem van die see en dit hulle gebied dus kleiner sal maak. Hy is bekommerd dat die warm water vanaf die kragstasie die kelp negatief sal affekteer. *Mr Niemand stated that his community received their current land from the Government in 2001 and that the harvesting of sea kelp is their only source of work in the area. He stated that should the exclusion zones be put in place, it will reduce the area in which they are currently harvesting kelp. He is also concerned that the water being pumped in and out of the proposed power station may negatively affect kelp in the area.*	Mnr Heydenrych het genoem dat die potentiële impak wat die kragstasie op die gemeenskap sal hê met betrekking to die area waar hulle kelp van die see kan neem, is ‘n impak wat geidentifiseer en in ag geneem moet word. Omrede daar sekuriteitssones rondom die kragstasie sal wees, kan die gemeenskap met Eskom vergader om moontlik toegang tot die perseel te verkry deur middel van ‘n permit. Mnr Heydenrych het ook genoem dat die marine spesialis gevra was om die impak van stasie op marine spesies soos kelp te identifiseer. Die doel van die studie was, onder andere, om die afstand en diepte waar die verhitte water vrygelaat moet word te bepaal, sodat marine spesies nie negatief beinvloed word nie. Al is die water 12 ℃ warmer as die water wat ingen eem word, sal dit by ‘n diepte en afstand vrygelaat word waar dit nie die kelp negatief sal beinvloed nie. *Mr Heydenrych stated that the potential impact of the power station on the reducing the area in which kelp can be harvested by the Buffeljagsbaai community, is an impact that would need to be identified and considered. Considering that there will be security zones around the station, the community may be able to arrange with Eskom and other authorities that members of the community can gain access to the site through a permit system to harvest kelp.*

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			Mr Heydenrych explained that the marine specialist appointed for the Nuclear-1 EIA was requested to determine the impact of the proposed power station on marine species such as kelp. One of the aims of the study was to determine at what distance and depth the heated water from the station can be discharged into the ocean without affecting marine species such as kelp. Although the discharged water will be approximately 12 ℃ warmer than the water being pumped into the station, it will be discharged at a depth and distance which will not affect kelp species.
24	Ms Sarah Niemand, resident of Buffeljagsbaai.	Mev Niemand het genoem dat die kelp in hulle area koue water benodig om te oorleef. Mev Niemand het ook genoem dat hulle gemeenskap verskil van die naby Koeberg in dat die Buffeljagsbaai gemeenskap heeltemal afhanklik is van die see vir hulle inkomste. Daar is geen ander industreë in die area wat die gemeenskap kan ondersteun nie. *Ms Niemand stated that kelp in their area is very dependent on cold water.* *Ms Niemand also stated that there is a difference between the communities residing close to Koeberg and the Buffeljags community in that the members of her community are dependent on the sea for their livelihoods. There are no other industries in the area that can support the community or provide them with employment.*	Mnr Heydenrych het genoem dat GIBB bewus is van spesies soos kelp en perlemoen wat afhanklik is van koue water om te oorleef. Die spesialis wat aangestel is vir die studie het hierdie feit in ag geneem in haar studie en bevind dat daar geen impak op kelp sal wees nie solank Eskom haar spesifikasies gevolg word. Mnr Heydenrych het ook genoem dat daar wel gemeenskappe naby die Koeberg stasie is wat afhanklik is van marine bronne soos kelp vir hulle lewensbestaan, en dat studies in die area gewys het dat daar geen impak op kelp in die area is nie. *Mr Heydenrych stated that GIBB is aware that species such as kelp and abalone are dependent on cold water conditions. The appointed specialist did consider this potential impact and her findings show that there will be no impacts on kelp or abalone as long as Eskom follows the specifications she provided.* *Mr Heydenrych also pointed out that there are communities living adjacent to the Koeberg Nuclear Power Station that are*

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			also dependent on the harvesting of marine resources such as kelp for their livelihoods and that studies undertaken in that area showed that there was no impact on marine species. Ms Deidre Herbst of Eskom stated, in English, that if the exclusion zones may negatively affect the livelihoods of the Buffeljags community then this must be considered and assessed in the EIA.
25	Dave Whitehall, Landowner	Mr Whitehall pointed out that a section of the Revised Draft EIR stated that the temperature of sea water can vary between different locations and that generalisations cannot be made. Mr Whitehall also pointed out that apart from the impact on kelp forests in an area such as Walker Bay, the impacts on penguins and fish populations must also be considered.	The comment was noted. Mr Heydenrych stated that the marine specialist also looked at species such as and penguins and sharks, as there is shark diving in this area, and the results indicate that none of these species will be affected by the proposed power station.
26	Mike Kantey, Coalition Against Nuclear Energy	Mr Kantey noted that bottom feeders such as mussels and abalone can be impacted on by the accumulation of radioactive substances (e.g. Strontium and Ceasium) in them. Mr Kantey stated that the Black Mussel populations has been be affected by the proposed power station. A report providing 20 years of research done on black mussel populations adjacent to Koeberg was produced. It has shown radioactivity in their bodies. Another point is that the radioactivity of the sea water comes precisely from the discharge of Strontium 19	Mr Heydenrych explained that those aspects regarding radioactivity and its potential impacts on marine life have been considered in the EIA and specifically dealt with in the marine ecology report. The levels of radiation found in areas surrounding the Koeberg Nuclear Power Station has been monitored for the past 20 years and it has been found that there are no impacts associated with the presence of these elements. It should be noted that these elements occur naturally in the atmosphere and in the sea water since atmospheric nuclear testing started in the 1940s. However, the finding of the marine specialists is that these elements have no health effects on marine species at the Koeberg Nuclear Power Station.

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		and Ceasium 137 as by-products. In the opening remarks of the presentation the assertion is made that nuclear energy is clean but this does not take into consideration that the routine emissions of Strontium and Ceasium 137 have half-lives of several thousand years. So the radioactive decay of Strontium and Ceasium 137 over hundreds of years continues to have an impact on abalone and mussel populations. Stated that the Buffeljags community is dependent on the sea for their livelihoods so these types of impacts will negatively affect them. Mr Kantey further noted that it is important to consider all the marine tourism activities such as whale watching and shark diving and potential impacts on these activities from a biological, radiological, and zoological perspective. This stated that this constitutes a fatal flaw in the EIA.	
27	Mike Kantey, Coalition Against Nuclear Energy	Mr Kantey asked that it be noted in the minutes of the meeting that the sound equipment is faulty and that it is highly irregular that a public meeting be disrupted due to poor sound management.	The point was noted.
28	Mike Kantey, Coalition Against Nuclear Energy	The environmental science laboratory reports produced by Eskom show that substantial amounts of Ceasium 137 and Strontium in relation to volume of abalone. Any attempt to pretend that there are no environmental impacts is disappointing. I would be happy to provide these reports and the figures and tables drawn from them. Having said that, and having noted the response with regard to Nuclear testing in	Mr Heydenrych stated that he stands by his initial statements and that this is based on studies undertaken by prominent scientists at the University of Cape Town, namely Professor Charlie Griffiths and Dr Tammy Robinson.

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		my own analysis of the allegations in your own report and representations to the public I think that one must argue that if you look in the way that the wind regime operate in the northern and southern hemisphere, it is such that 99.99 percent of weapons testing above ground prior to cessation in 1972 demonstrates very little penetration in the southern hemisphere. Moreover, one would expect that after 1972, the volume of Ceasium 137 would decline. Studies produced by Eskom's own researchers have shown that the Strontium 90 level actually increases. This follows that the assumption that the levels of these elements in the atmosphere are caused by nuclear fallout is unscientific. It follows that the contamination in abalone is due to the nuclear facility.	
29	Lesley Richardson, Flower Valley Conservation Trust.	Ms Richardson referred to the scoring of the three different sites and asked if, should the EIA be undertaken again from the start and if other sites besides these three would be assessed and whether they would have provided a different range of outcomes. Why were these three sites chosen?	Mr Heydenrych explained that the three sites currently being considered were identified in the Nuclear Site Investigation Programme, which began in the 1980s. There were initially five sites identified for initial assessment in this EIA. These include the three sites assessed in the impact assessment phase of the EIA as well as two other sites that were situated in the Northern Cape. Additional sites such as the Coega Industrial Development Zone have also been suggested, but for various reasons were found to be unsuitable for the construction of a nuclear power station or could not be considered further in the EIA for Nuclear-1.
30	Lesley Richardson, Flower Valley Conservation Trust	Ms Richardson asked whether there will be exclusion zones off-shore that may inhibit people from fishing close to the proposed power station.	Mr Heydenrych explained that there will likely be a 1 to 2 km security exclusion zone on the sea surrounding the proposed station. This will be identified through an investigation that will be undertaken by the National Intelligence Agency.

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31	Lesley Richardson, Flower Valley Conservation Trust	Ms Richardson asked whether there is environmental monitoring on site during construction and maintenance and if there is a body that can undertake this monitoring.	Mr Heydenrych explained that with most EIAs, there is a recommendation that an independent Environmental Control Officer (ECO) be appointed to monitor construction activities to ensure that they comply with the provisions set out in the EMP, if approved by the DEA. It will be suggested in the EIR that the ECO report to an Environmental Monitoring Committee (EMC) which will consist of specialists, government representatives and local community members. The ECO will also have the right to report any transgressions directly to the Authorities. Ms Herbst of Eskom explained that the authorities have set out environmental control measures for all their sites. There will be an independent ECO as well as two to three Environmental Officers appointed by the individual contractors to monitor compliance on site. There could therefore be up to 15 people on site that monitor environmental compliance. External auditors are also appointed to monitor the sites every three to six months. This monitoring continues during the operation of the facility, it is a requirement from the authorities that internal and external audits also take place.
32	Lesley Richardson, Flower Valley Conservation Trust	Ms Robinson asked if there will also be monitoring undertaken to assess long term environmental impacts associated with the power station.	Ms Herbst stated that Eskom is committed to the long term conservation of the areas surrounding their power station. An example is the new pumped storage scheme in the Drakensberg, which is situated in an environmentally sensitive area. That facility is now part of an 8 000 ha conservation area that is managed by Eskom. All environmental baseline studies

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			were undertaken 6 months prior to commencement of construction and there will be ongoing monitoring to assess potential future impacts. Eskom will be held accountable for the long term conservation of such areas. In the case of Bantamsklip, Eskom have met with nature conservation authorities to develop a conservation area surrounding the site, should it be recommended as the preferred site and environmental authorisation has been provided.
33	John Williams, Save Bantamsklip and the Stanford Conservation Trust	Mr Williams referred to the question by Ms Richardson regarding the selection of the 5 original sites. Mr Williams wished for it to be noted that the Bantamsklip site was originally chosen by the Apartheid government because it was situated close to the previous De Hoop Nuclear Complex, which was erected with the aim of launching nuclear armed missiles. Mr Williams stated that, given the fact that South Africa has dismantled its nuclear weapons and abandoned its nuclear programme, the Bantamsklip site would not have been selected by the present government, given the environmental sensitivity of the surrounding area. Mr Williams pointed to the Bantamsklip site maps and indicated areas in the vicinity of the site that is currently under conservation. These include the Cape Agulhas National Park, as well as the Soetfontein and Pearly Beach Nature Reserves. Mr Williams also wished for it to be noted that this area is recognised	Comment noted.

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		globally as a world heritage site, and that the land must therefore be donated to the South African National Parks (SANParks).	
34	Eugene Henry, Pearly Beach Ratepayers Association	Mr Henry asked whether the recent events in Japan, where several nuclear reactors were damaged due to earthquakes and subsequent tsunamis, were taken into account, and whether there is any feedback from GIBB regarding these events.	Mr Nicholls of Eskom stated that a presentation will be given after the conclusion of the public meeting that will explain the events that transpired in Japan and its relevance to the proposed Nuclear-1 project.
35	Unidentified I&AP	The interested party stated that in the first EIR, it was stated that there are no marine mammals of any significance in the area surrounding Bantamsklip. He stated that he has personally seen southern right whales with their calves in this area. There were also several sections in the report which stated that the impact on marine mammals in the area is 'unlikely', and asked that clarification be provided as to the definition of this word.	Mr Heydenrych responded that there are cases where it is possible to quantify the impact that heated water may have on the environment, as certain thresholds can be identified where it becomes an impediment to marine species. In the case of the release of spoil into the water, the marine specialists were able to determine that there will be times during the year when, if the spoil exceeds a certain threshold, it would affect marine species. In all cases, however, an EIA remains a predictive tool and the Environmental Assessment Practitioner relies on the feedback provided by the specialists to determine the level of environmental impacts associated with a given development. These results can be based on quantified figures or their expert knowledge that was gained with experience working in their respective fields. The word 'unlikely' can be defined as having a low probability.
36	Mr George Adelaide	Mr Adelaide wished to note that he has witnessed Eskom dismantle transmission lines, and left the remains of the pylons on the ground where they are	Comment noted. **Post meeting note:**

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		still visible. He asserted that in this case, the environmental monitoring on site was poorly managed. Mr Adilade also wished to note that Eskom has identfied 17 sites in the Western Cape for pumped storage schemes, 14 of which are situated in protected areas.	**This is an unacceptable process. Eskom is investigating this situation (Ms. Deidre Herbst).**
37	Mr Rodney Anderson, Gansbaai Ratepayers Association.	Mr Anderson asked what the process of decommissioning of a nuclear power plant entails.	Mr Nicholls stated that Generation III nuclear power stations have an operating life of between 60 to 80 years. He explained that when a nuclear power station is decommissioned, it is literally taken to pieces and that all radioactive material and plant will be taken to the Northern Cape for disposal at the Vaalputs site. The nuclear fuel will be kept on site for a period of 10 years, after which it will be buried underground in granite formations. However, in the case of the Koeberg Nuclear Power Station or future sites for Nuclear power stations in South Africa, it is likely that these sites will be used again for the construction new power stations, as existing services such transmission line servitudes are already connected to those sites.
38	Mr Rodney Anderson. Gansbaai Ratepayers Association	Mr Anderson asked whether there are any other nuclear power stations in the world that has been decommissioned and turned into greenfield sites	Mr Nicholls confirmed that there has been other nuclear power stations which have been converted into greenfield sites. The first of which is a PWR station constructed in the USA which is now back to a greenfields site.
39	Mr Rodney Anderson. Gansbaai Ratepayers Association	Mr Anderson wished to note that, because we, and our grandchildren will not be alive for the decommissioning of the station, we have to ensure	Comment noted.

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		that construction of the station is never undertaken in the first place.	
40	Ms Lyn Eager	Ms Eager asked why the other two sites of the original five were scoped out.	Ms Ball explained that the other two sites in the Northern Cape are both very long distances away from the transmission network and from the areas where the electricity is required. For this reason, long new transmission lines would have been required. The impacts associated with transmission lines are high and much more land would have had to been secured to build the lines. However, Eskom has stated publicly that it may still consider these sites as future locations for nuclear power stations.
41	Mike Kantey, Coalition Against Nuclear Energy	Mr Kantey stated that the decommission story is interesting because while it is likely to take place in 80 years he has inside knowledge to talk about many reactors constructed before Three-Mile Island. What is interesting is that after the German Vice Chancellor, Ms Merkel, proposed to extend the lives of 17 reactors, she lost the province of Warten Witzenberg. So the authorities may believe that it is in the interest of the public to extend the life of nuclear power stations, but many citizens disagree. This is because of the age of these stations and the overall decay of the metals that protect the core of the reactors. There is no civilian reactor built in the 1970s for which we have the authority to say that it can last for more than 40 years. Now that we have reached 2011, the anniversary of that timeline, there will be many nuclear power stations that will be deactivated, long before they have any positive impact on reducing global	Comment noted.

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		warming. They will have to be replaced and their lives not extended.	

APPENDIX 2: PRESENTATION OF REVISED DRAFT ENVIRONMENTAL IMPACT REPORT

APPENDIX 3: ATTENDANCE REGISTER