

**PROPOSED ESKOM NUCLEAR POWER STATION
AND ASSOCIATED INFRASTRUCTURE**

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

**COMMENTS ON
DRAFT ENVIRONMENTAL IMPACT ASSESSMENT REPORT**

**(Volume 17 RDEIR IRR 04 July 2011)
(MINUTES OF GANSBAAI PUBLIC MEETING 23 MAY 2011)**

Issues have been received from the following stakeholders:

No	Name	Organisation
1	Wilfred Chivell	Dyer Island Conservation Trust
2	John Williams	Save Bantamsklip and Stanford Conservation Trust
3	John Williams	Save Bantamsklip and Stanford Conservation Trust
4	Mike Kantey	Coalition Against Nuclear Energy
5	Eugene Henry	Pearly Beach Ratepayers Association
6	Eugene Henry	Pearly Beach Ratepayers Association
7	Eugene Henry	Pearly Beach Ratepayers Association
8	Eugene Henry	Pearly Beach Ratepayers Association
9	Mike Kantey	Coalition Against Nuclear Energy
10	Rob Fryer	Overstrand Conservation Foundation
11	Rob Fryer	Overstrand Conservation Foundation
12	Mike Kantey	Coalition Against Nuclear Energy
13	Rob Fryer	Overstrand Conservation Foundation
14	John Williams	Save Bantamsklip and Stanford Conservation Trust
15	John Williams	Save Bantamsklip and Stanford Conservation Trust
16	John Williams	Save Bantamsklip and Stanford Conservation Trust
17	Chairman David de Waal	Call to Order
18	Dave Whitelaw:	Private Landowner and Conservationist
19	Dean James	Gansbaai Sand and Stone
20	Dean James	Gansbaai Sand and Stone
21	Dean James	Gansbaai Sand and Stone
22	Chris Pretorius	Interested and Affected Party
23	Chris Pretorius	Interested and Affected Party
24	Chris Pretorius	Interested and Affected Party
25	Chris Pretorius	Interested and Affected Party
26	Chris Pretorius	Interested and Affected Party

27	Mike Kantey	Coalition Against Nuclear Energy
28	Mr Daniel Niemand	Interested and Affected Party
29	Ms Sarah Niemand	Interested and Affected Party
30	Dave Whitehall	Interested and Affected Party
31	Mike Kantey	Coalition Against Nuclear Energy
32	Mike Kantey	Coalition Against Nuclear Energy
33	Mike Kantey	Coalition Against Nuclear Energy
34	Lesley Richardson	Flower Valley Conservation Trust
35	Lesley Richardson	Flower Valley Conservation Trust
36	Lesley Richardson	Flower Valley Conservation Trust
37	Lesley Richardson	Flower Valley Conservation Trust
38	John Williams	Save Bantamsklip and Stanford Conservation Trust
39	Eugene Henry	Pearly Beach Ratepayers Association
40	Un-identified	Interested and Affected Party
41	George Adelaide	Interested and Affected Party
42	Rodney Anderson.	Gansbaai Ratepayers Association
43	Rodney Anderson.	Gansbaai Ratepayers Association
44	Rodney Anderson.	Gansbaai Ratepayers Association
45	Lyn Eager	Interested and Affected Party
46	Mike Kantey	Coalition Against Nuclear Energy

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1		Wilfred Chivell, Dyer Island Conservation Trust	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. I like to see a presentation dealing with impacts associated with the Bantamsklip site.	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 the meeting was thus to present the key changes made to the Report (i.e. the Revised Draft EIR [Revision]). Most of those changes revolved 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 had to be evaluated and addressed in the Revised Draft EIR by 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 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. I would like to know what the status is of the Bantamsklip site.	The status of the Bantamsklip site has not changed since the publication of the previous Draft EIR (i.e. the Revised 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 as detailed in the Revised Draft EIR (Revision 1). The DEA is however the decision-making Authority.

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3		John Williams, Stanford Conservation Trust	<p>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.</p> <p>The question is where the other stations will eventually be placed. Please confirm if Bantamsklip may be used in future and whether other sites are going to be revisited with a new EIR. Furthermore, confirm if this EIA is for single nuclear power station or for six power stations.</p> <p>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, will the status of the Bantamsklip site remain the same.</p>	<p>Many of the questions were answered in the presentation delivered at the public meetings held in May 2011. This EIA is for a single 4 000 MW nuclear power station. Koeberg Power station is 1 800 MW; to meet the 9 600 MW 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 (i.e. the Revised Draft EIR [Revision 1], 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 No. 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.</p> <p>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</p>

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				<p>decide that, for instance, the Duynefontein site is more preferable from an environmental perspective or that none of the sites be authorised.</p> <p>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.</p> <p>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 (Revision 1). In the previous public meetings held in the Gaansbaai area, which Mr Williams attended, the findings of the Draft EIR were discussed.</p>
4		Mike Kantey, Coalition Against Nuclear Energy	This issue is 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. This public meeting is crucial for any legal process that is ongoing with respect to this EIA. A large amount of money is required for the	Your opinion and feelings on the approval and construction of a nuclear power station are noted. GIBB will endeavour to provide a transparent Public Participation Process in order to ensure a transparent, legally compliant EIA.

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			proposed nuclear power station.	
5		Eugene Henry, Pearly Beach Ratepayers Association	What is the definition of 'spoil' and is it radioactive water waste being pumped into the ocean?	Spoil is sand and rock which would be 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 a result of activities occurring during construction and would not include radioactive waste.
6		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?	The water required for the cooling of the power station is taken from the sea and used for once through cooling and then 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 nuclear power station.
7		Eugene Henry, Pearly Beach Ratepayers Association	The decision taken by the Minister of Energy to provide 9 600 MW for nuclear energy in the Integrated Resource Plant (IRP) was it subject to public participation?	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.
8		Eugene Henry, Pearly Beach Ratepayers	The PBRA was not party to any of those discussions and were not able to provide any input to the IRP.	GIBB cannot speak on behalf of the Government but is aware that there were advertisements placed in newspapers advertising the process and requesting input from the public.

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		Association		GIBB is also aware that the public participation process was extended and that public hearings were held in 2010.
9		Mike Kantey, Coalition Against Nuclear Energy	<p>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 process for the IRP. It is obvious that the PBRA was not approached.</p> <p>The PBRA can reserve their right to participate according the provisions made in the Constitution regarding public participation.</p> <p>With regards to civil society's response to the IRP, 430 submissions were made. 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.</p>	Your comment is noted, however GIBB cannot provide any further comment. GIBB is not consulted to comment on behalf of Government, and are uncertain as to whether or not the PBRA were indeed approached as part of the public participation process for the IRP.
10		Mr Rob Fryer, Overstrand Conservation Foundation	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.	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. 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

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				itself and its immediately associated infrastructure. A separate EIA process for housing may therefore be required in future. The social aspects associated with accommodation of workers have been considered in this EIR, within the Social Impact Assessment (Revised DEIR Revision 1 Appendix E18).
11		Mr Rob Fryer, Overstrand Conservation Foundation	This is a major flaw in the EIA process. Were any investigations made as to whether the area (around the Bantamsklip site) can support 7 700 workers and their dependents. In my opinion there is no such infrastructure in the area.	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. 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.
12		Mike Kantey, Coalition Against Nuclear Energy	The question is whether considering housing in the Nuclear-1 EIA constitutes a fatal flaw or not. 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 (Revision 1) and asked that this be noted.	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.
13		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.	GIBB is also the appointed Environmental Consultant for the Bantamsklip Transmission Lines EIA. 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 Witzenberg and Bredasdorp in November 2009, and at that stage feasible routes for the transmission

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			<p>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.</p> <p>I conferred with several of the specialists and came to the understanding that there was not a feasible route for the transmission lines. Please confirm what the status of this EIA process is and whether a feasible route has been identified.</p>	<p>lines had as yet not been identified. The Environmental Impact Assessment for the Transmission lines has provided sufficient information to inform this process. Since Bantamsklip is not the preferred site the completion of the EIA has been put on hold.</p>
14		John Williams, Save Bantamsklip and the Stanford Conservation Trust	<p>The Bantamsklip EIA and EIR are fatally flawed because the biodiversity of the area surrounding the Bantamsklip site is of global importance. I am 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.</p>	<p>The Marine Specialist Report discusses abstraction of cooling water and organism entrainment, release of warmed cooling water and release of desalination effluent issues in sections 4.1.2 ,4.1.3 and 4.1.4 respectively. The mitigation measures for these activities are discussed in sections 5.1.2-5.1.3 in the Marine Specialist Report.</p> <p>Abstraction of cooling water will result in a low to medium impact and no irreplaceable resources will be impacted upon. The release of warmed cooling water is predicted to have medium consequences and be of medium significance due to the fact that it is a restricted area that would be affected. Release of desalination effluent will have no impact during operational phase, but rather only during construction. The brine will be sufficiently diluted within</p>

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				<p>110m from the point of release and any impacts will be extremely localised. This impact is considered to be of low-medium significance.</p> <p>Abstraction of cooling water will be mitigated by ensuring the rate of water being drawn into the intake pipes is slow enough for any organisms to swim comfortably against the flow direction. The design of outflow pipes will ensure effluent is pumped far out enough to adequately disperse. There are also multiple outlet points to minimise the temperature. Desalination effluent will be released with cooling water to enable mixing.</p> <p>Impact assessment and mitigation for terrestrial systems on the Bantamsklip site are covered in sections 5.2.5 and 5.2.6 of the Dune and Botany Impact Assessment Specialist Report in the Revised DEIR Revision 1 respectively. The assessment of impacts resulted in the conclusion that there would be no significant impacts of the nuclear power station after mitigation. There are also several mitigatory measures recommended for aspects such as the size and location of the nuclear power station footprint, habitat fragmentation, powerlines, search and rescue operations for plants, a rehabilitation plan, coastal corridor and buffers, inlet and outlet pipes, spoil sites as well as cumulative impacts.</p>
15		John Williams, Save Bantamsklip and the Stanford Conservation Trust	Why was there no recognition 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	GIBB is aware of the Buffeljagsbaai community and has met with members of this community during the Bantamsklip Transmission Lines EIA public meetings. The community is considered within the Nuclear-1 EIA and GIBB can confirm that there are indeed members of the community noted

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			documents and is not shown in any of the maps provided in the Revised Draft EIR (revision 1). The community is 500 strong 'in the season' and when added to the community of Pearly Beach there are 5 000 people living within 7 km of the footprint of the EIA. The Buffeljagsbaai community has not been consulted and asked if the community may have to be relocated.	within the I&AP database, namely Keshie (surname unknown) and Sarah Niemann. There are no recommendations to move any of the communities situated within the vicinity of any of the three sites.
16		John Williams, Save Bantamsklip and the Stanford Conservation Trust	<p>The Buffeljagsbaai community was not placed in any of the maps produced for the Revised Draft EIR (Revision 1).</p> <p>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.</p> <p>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.</p>	<p>The comment was noted.</p> <p>Although the Buffeljagbaai Community is not indicated on any of the maps in the main Revised Draft EIR (Revision 1), the community is mentioned within the Social Impact Assessment Report (Appendix E18), Visual Assessment (Appendix E19), Economic Assessment (Appendix E17) and Human Health Risk Assessment (Appendix E24). The Economic Assessment specifically acknowledges the Buffeljagsbaai community's dependence on non-commercial fishing.</p> <p>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).</p>
18		Dave Whitelaw: Private Landowner and	Will the outcome of the Nuclear-1 EIA be revisited should further EIAs, such as for the construction of housing for workers and	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

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		Conservationist	their dependents, identify any fatal flaws.	<p>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.</p> <p>The transmission lines EIA serve as a good example. Should the power station receive a position 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.</p>
19		Dave Whitelaw: Private Landowner and Conservationist	Were 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.	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.
21		Mr Dean James. Gansbaai Sand and Stone	Would it be possible for the spoil material to be transported inland where it can be crushed and re-used? By reusing this	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

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			material, it will also save money.	<p>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 (Revision 1) 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.</p> <p>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.</p>
22		Chris Pretorius, resident of Wolvengat	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?	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. Also Eskom owns all the land in the 800 m exclusion zone at all three of the alternative sites.
23		Chris Pretorius, resident of Wolvengat	I would like to know if in the original EIR, the proposal was for a smaller station but that the subsequent EIR made provision for a larger station.	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.
24		Chris Pretorius, resident of	In the original EIR GIBB clearly stated that there will be an 8 km exclusion zone where	There are different exclusions zones for different types of nuclear power stations. The Koeberg Nuclear Power

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		Wolvengat	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?	<p>Station, being an older generation power station, has a 16 km zone.. The power station proposed for Nuclear-1 is a Generation III nuclear power station, which has more advanced technology and has different safety zones. Therefore if the proposed power station conforms to criteria in this EIA then the exclusion zones of 800 m and 3 km will apply.</p> <p><u>COMMENT FROM INDEPENDENT NUCLEAR SPECIALIST:</u></p> <p>As stated this would then be one of the design criteria for any proposed new technology to be deployed in future.</p>
25		Chris Pretorius, resident of Wolvengat	The first EIR is therefore incorrect.	The initial EIR is correct. The Koeberg Nuclear Power Station has larger exclusion zones than the power station proposed for Nuclear-1.
26		Chris Pretorius, resident of Wolvengat	Will 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?	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 nuclear 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.
27		Mike Kantey, Coalition Against Nuclear Energy	It should be noted that the company undertaking the Pebble Bed Modular Reactor (PBMR) programme requested an 800 m exclusion zone. It was never accepted by the National Nuclear	The exclusion zone for the PBMR was 400m. It is important to note that there are currently people living within 2 km of the Koeberg Nuclear Power Station. It is this possible for people to live within this exclusion zone, even in the case of Koeberg, which has a larger exclusion zone than the one

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			<p>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.</p> <p>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 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.</p>	<p>proposed for Nuclear-1. For this reason, no one will be relocated from any of the proposed sites for the Nuclear-1 power station.</p> <p>The Exclusion Zone is described as a radius determined for the purpose of evacuating persons in the event of a nuclear accident, according to the siting regulations, no members of the public resident, no uncontrolled recreational activities, no commercial activities, or institutions which are not directly linked to the operation of nuclear installations situated within this zones. Over and above the 800m exclusion zone proposed by Eskom, Eskom has chosen to own land within the 2km radius of the nuclear power station and thus enveloping the 800m radius. This will further be submitted to the NNR through nuclear licensing processes over which the actual emergency planning zones will be agreed</p>
28		Mr Daniel Niemand, resident of Buffeljagsbaai.	<p>Ons in die gemeenskap het die kelp projek by Buffeljagsbaai van die Staat ontvang in 2001. Dit is die enigste vorm van werkskepping in in ons omgewing. Die plasing van die kragstasie gaan hulle affekteer omrede dit ook die area geleë is waar hulle kelp geneem word van die see en dit dus hulle gebied kleiner sal maak. Ek</p>	<p>Die potensiële impak wat die kragstasie op die gemeenskap sal hê met betrekking tot die area waar hulle kelp van die see kan neem, is 'n impak wat geïdentifiseer en in ag geneem moet word. As gevolg van die feit dat 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.</p>

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			<p>is bekommerd dat die warm water vanaf die kragstasie die kelp negatief sal affekteer.</p> <p><u>Translation:</u> The community received their current land from the Government in 2001 and that the harvesting of sea kelp is our only source of work in the area. If the exclusion zones were put into place, it will reduce the area in which they are currently harvesting kelp. Mr Niemand is also concerned that the water being pumped in and out of the proposed power station may negatively affect kelp in the area.</p>	<p>Die "Seelewe" spesialis is gevra om die impak van stasie op seelwew 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 beïnvloed word nie. Al is die water 12 °C warmer as die water wat ingeneem word, sal dit by 'n diepte en afstand vrygelaat word waar dit nie die kelp negatief sal beïnvloed nie.</p> <p><u>Translation:</u> The potential impact of the power station on 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.</p> <p>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 °C warmer than the water being pumped into the station, it will be discharged at a depth and distance which will not affect kelp species.</p>

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29		Ms Sarah Niemand, resident of Buffeljagsbaai.	<p>Die kelp in die area het koue water benodig om te oorleef.</p> <p>Ons gemeenskap verskil van die ander hier naby Koeberg omdat die Buffeljagsbaai gemeenskap heeltemal afhanklik is van die see vir hulle inkomste. Daar is geen ander industrie in die area wat die gemeenskap kan ondersteun nie.</p> <p><u>Translation:</u> The kelp in their area is very dependent on cold water.</p> <p>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.</p>	<p>GIBB is 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 navolg.</p> <p>Daar is 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.</p> <p><u>Translation:</u> 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. The release of warmed cooling water is discussed in section 3.2.3 of the Marine Ecology Impact Assessment.</p> <p>There are also communities living adjacent to the Koeberg Nuclear Power Station that are 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.</p>
30		Dave Whitehall, Landowner	I would like to point 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.	<p>The comment is noted.</p> <p>The marine specialist also looked at species such as and</p>

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			<p>Furthermore, 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.</p>	<p>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.</p>
31		<p>Mike Kantey, Coalition Against Nuclear Energy</p>	<p>The bottom feeders such as mussels and abalone can be impacted on by the accumulation of radioactive substances (e.g. Strontium and Ceasium) in them.</p> <p>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.</p> <p>Another point is that the radioactivity of the sea water comes precisely from the discharge of Strontium 19 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.</p> <p>The Buffeljags community is dependent on</p>	<p>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.</p> <p><u>COMMENT FROM INDEPENDENT NUCLEAR SPECIALIST:</u></p> <p>As discussed the facility will be subject to a licence application to the NNR - as has been discussed comprehensively above this will require a safety case which will examine the radiological impact from all initiating events which have the potential for an offsite impact including via marine pathways and from any routine releases in accordance with standards and practices in line with international best practice.</p>

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			<p>the sea for their livelihoods so these types of impacts will negatively affect them.</p> <p>Furthermore, 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.</p>	
33		Mike Kantey, Coalition Against Nuclear Energy	<p>The environmental science laboratory reports produced by Eskom show that substantial amounts of Cesium 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 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 Cesium 137 would decline. Studies produced by Eskom's own researchers</p>	<p>GIBB stands by our initial statements that the report is based on studies undertaken by prominent scientists at the University of Cape Town, namely Professor Charlie Griffiths and Dr Tammy Robinson.</p> <p><u>COMMENT FROM INDEPENDENT NUCLEAR SPECIALIST:</u></p> <p>As stated the findings are based on an independent report by acknowledged specialist in the field.</p>

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			<p>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.</p>	
34		<p>Lesley Richardson, Flower Valley Conservation Trust.</p>	<p>I am referring to the scoring of the three different sites. 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?</p>	<p>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.</p>
35		<p>Lesley Richardson, Flower Valley Conservation Trust</p>	<p>Will there be exclusion zones off-shore that may inhibit people from fishing close to the proposed power station.</p>	<p>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.</p> <p><u>COMMENT FROM INDEPENDENT NUCLEAR SPECIALIST:</u></p> <p>No additional comment - as stated this is effectively part of the potential physical security arrangements and therefore subject to additional requirements.</p>

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36		Lesley Richardson, Flower Valley Conservation Trust	Is there environmental monitoring on site during construction and maintenance and if there is a body that can undertake this monitoring.	<p>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.</p> <p>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.</p>
37		Lesley Richardson, Flower Valley Conservation Trust	Will there also be monitoring undertaken to assess long term environmental impacts associated with the power station.	<p>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 were undertaken 6 months prior to commencement of construction and there will be ongoing monitoring to assess potential future impacts.</p> <p>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 nature conservation area surrounding the site,</p>

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				should it be recommended as the preferred site and environmental authorisation has been provided.
38		John Williams, Save Bantamsklip and the Stanford Conservation Trust	<p>I refer to the question by Ms Richardson regarding the selection of the 5 original sites.</p> <p>Can it please 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. Furthermore, 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.</p> <p>I would also like to point out that 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. Please also note this area is recognised globally as a world heritage site, and that the land must therefore be donated to the South African National Parks (SANParks).</p>	<p>Comment noted.</p> <p>One of the mitigation measures proposed for the Bantamsklip site is the creation of a nature reserve for the non-development portion for the site. The Botany and Dune Ecology Impact Assessment Appendix E11 in the Revised Draft EIR Revision 1 states that this will improve the conservation status of certain vegetation types on the Agulhas coastal plain.</p>

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39		Eugene Henry, Pearly Beach Ratepayers Association	Were recent events in Japan, where several nuclear reactors were damaged due to earthquakes and subsequent tsunamis, taken into account?.	Your comment is noted. The Japanese disaster is indeed a stark reminder of the unpredictability of the natural environment. However, it is well known that South Africa is located on a vastly more stable tectonic environment than that of Japan, which is situated close to a major subduction zone within the Pacific Ocean. The descriptions and facts reported in the Geological Hazard and Seismic Risk Assessment stem from published data and work undertaken by the Council for Geoscience and others. In terms of the identification of faults and seismic risk, the information

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				<p>represents the current knowledge and understanding based on a regional picture. New evidence of neotectonic¹ movements may be discovered in the more detailed investigations that still have to be undertaken for the design of the power station. However, based on current knowledge, the site has been found to have no seismic disqualifiers. Information obtained during more detailed studies will be used to refine the design of the power station, but will not change the siting decision.</p> <p>Furthermore, the safety of the KNPS has recently undergone a special review considering the events at the Fukushima nuclear power plant. The evaluation by the NNR on the safety assessment done by Eskom concluded that KNPS is able to withstand these events from Fukushima.</p>
40		Unidentified I&AP	<p>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. I have personally seen southern right whales with their calves in this area.</p> <p>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.</p>	<p>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.</p> <p>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</p>

¹ The study of tectonic movements in current or recent geological time

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				<p>figures or their expert knowledge that was gained with experience working in their respective fields.</p> <p>The word 'unlikely' can be defined as having a low probability.</p>
41		Mr George Adelaide	<p>Please note that I have witnessed Eskom dismantle transmission lines, and left the remains of the pylons on the ground where they are still visible. He asserted that in this case, the environmental monitoring on site was poorly managed.</p> <p>Eskom has identified 17 sites in the Western Cape for pumped storage schemes, 14 of which are situated in protected areas.</p>	<p>Comment noted.</p> <p>This is an unacceptable process. In order for us to give a detailed response the following is required: Which transmission line(s) is being referred to? Name of the project or the area of concern? Property name of where this happen? Was it reported to Eskom and to which Eskom Division? When did this happen?</p> <p>We need this information to ascertain whether this was a transmission or distribution line and to identify the scheme that was responsible for it. It is difficult to respond without the information required / mentioned above.</p>
42		Mr Rodney Anderson, Gansbaai Ratepayers Association.	Please explain the process of decommissioning of a nuclear power plant entails.	<p>Generation III nuclear power stations have an operating life of between 60 to 80 years. 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.</p> <p>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</p>

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				new power stations, as existing services such transmission line servitudes are already connected to those sites.
43		Mr Rodney Anderson. Gansbaai Ratepayers Association	Were any other nuclear power stations in the world decommissioned and turned into greenfield sites	There have 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.
44		Mr Rodney Anderson. Gansbaai Ratepayers Association	We, and our grandchildren, will not be alive for the decommissioning of the station; we have to ensure that construction of the station is never undertaken in the first place.	Comment noted.
45		Ms Lyn Eager	Why were the other two sites of the original five scoped out?	The alternative 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.
46		Mike Kantey, Coalition Against Nuclear Energy	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.	Thank you, your comment is noted

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			<p>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.</p> <p>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 warming. They will have to be replaced and their lives not extended.</p>	