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Dear Samantha Ralston

RE: ESKOM EIA CONCERNS FOR THE PROPOSED NUCLEAR POWER STATION AND ASSOCIATED INFRASTRUCTURE (DEA Ref. No: 12/12/20/944)

RE: REVISED DRAFT ENVIRONMENTAL IMPACT ASSESSMENT FOR PROPOSED ESKOM NUCLEAR POWER STATION AND ASSOCIATED INFRASTRUCTURE (NUCLEAR 1)

Comment 1:

CapeNature would like to thank you for the opportunity to comment on the above report. Please note that our comments relate only to the potential impacts on biodiversity and not the overall desirability of the proposed development. Please also note that we have not commented on any human health or safety issues, as this is beyond CapeNature's mandate and expertise.

We note that very little has changed in Draft Environmental Impact Report (EIR) Report with regards to the impacts on biodiversity the since this report was revised. We are therefore of the opinion that most of our previously raised comments remain relevant.

Alternatives

We note Thyspunt remains the preferred alternative. It is beyond CapeNature's mandate to comment on this alternative as it falls outside of the Western Cape, although we do note with concern that there are significant negative ecological impacts associated with this site. CapeNature's lack of further input with regards to this site should in no way be interpreted as support for this alternative. Given the ecological sensitivity of all three sites under consideration, we once again reiterate our concern that some site alternatives (i.e. in the Northern Cape) were dismissed very early on in the process, without thorough investigation.

We suggest further that given the strategic nature of this development, alternatives should not have been limited to sites owned by Eskom. Rather, the site alternatives should have been informed by what is most appropriate in terms of the potential environmental impacts of the facility on the receiving environment.

Response 1:



GIBB Holdings Reg: 2002/019792/02
Directors: R. Vries (Chairman), Y. Frizlar, B Hendricks, H.A. Kavthankar, J.M.N. Ras
Arcus GIBB (Pty) Ltd, Reg: 1992/007139/07 is a wholly owned subsidiary of GIBB Holdings.
A list of divisional directors is available from the company secretary.

Your comment regarding the alternative Northern Cape sites is noted. GIBB's exclusion of these alternatives at the end of the Scoping Phase and DEA's acceptance of this recommendation remains valid.

It is not necessarily true that the alternative sites in the Northern Cape would necessarily lead to lesser degradation of the environment. Although it is true that a large portion of the Northern Cape around the proposed sites has already been heavily degraded by diamond mining, the Northern Cape is also home to some of the most endangered and endemic succulent plant species on earth, since the Succulent Karoo Centre of Endemism, with critical biodiversity areas like the Knersvlakte, lies between the Northern Cape sites and the Western Cape. Furthermore the transmission lines would have to traverse the Namaqua National Park.

Comment 2:

Associated infrastructure

CapeNature reiterates its concern that the proposed nuclear facility is being considered separately from its associated infrastructure. We understand that one of the factors that caused the Northern Cape site alternatives to be dismissed was that new transmission lines would be required and this would be prohibitively costly. This was not assessed in any detail in the impact assessment. Bantamsklip will also require new transmission lines and these are also expected to be costly - this time to the environment (the transmission lines associated with Bantamsklip are anticipated to have significant negative impacts on biodiversity).

Unfortunately, the impacts of associated infrastructure appear to be selectively considered in this EIA. Further, we understand that expensive infrastructure upgrades could be required for construction and transportation of components of the facility. This could, for example, require a barge landing at Bantamsklip. This would be both costly and could have significant negative impacts on the sensitive coastal strip. We suggest that this should be considered and assessed in detail, *as part of a single process*; to ensure that the cumulative impacts of the proposed facility at all locations can be better understood.

It is essential that the impacts of all associated infrastructure as well as the footprint of the facility are clearly outlined and assessed before an informed decision can be made. We are of the opinion that piecemeal decision-making could result in a fatally flawed process.

Response 2:

Your comments are noted. The Revised Draft EIR (Version 2) has considered, as far as possible, the level of information available for each site, as well as whether the same level of assessment could be performed for each site not only in terms of the planned NPP but also (as far as possible) the associated infrastructure required to support the power station. It is as a result of the assessment that the Bantamsklip site has been excluded as a feasible site for the current application for Environmental Authorization. Please see Chapter 5 of the Revised Draft EIR (Version 2) for a more detailed discussion.

Comment 3:

Conservation value of Bantamsklip and Duynefontein

CapeNature is of the opinion that the faunal, botanical and freshwater ecological impact assessments were thorough, well presented and were adequately reflected in the main EIR. These assessments were, however, constrained by lack of detailed information with regards to the exact location the proposed facility (and associated infrastructure, as discussed above). At this stage, only a very broad understanding of the area potentially impacted is possible.

We do suggest that the fact that both sites have been identified as Critical Biodiversity Areas (CBAa) by systematic biodiversity plans for their municipalities need to be highlighted. This CBA status means that both sites are required to help meet biodiversity pattern and process thresholds (which includes targets set at national level). The desired management objective for a CBA is: "Maintain natural land. Rehabilitate degraded to natural or near natural and manage for no further degradation". The

compatibility of the proposed development with this desired management objective should be critically assessed, something which the EIR fails to do.

We will not repeat the specialists' findings here other than to support the conclusion that there are potentially significant negative impacts on biodiversity associated with both proposed sites in the Western Cape. While these can be reduced to some degree by carefully selecting the footprint, it must be recognised that the broader ecological context within which these footprints would be located remains important and sensitive. Introducing a new node of disturbance to these areas is not undesirable.

There appears to be some debate as to the conservation value of the dunes at the Duynefontein site. We suggest that the value of this feature should be considered both in terms of its geomorphological value and its importance in terms of both biodiversity pattern (e.g. what species and habitats it contains) and ecological processes (e.g. is it an important ecological driver?). These are slightly different factors and the findings of one specialist should not necessarily negate those of another (i.e. there is not necessarily one "right" answer).

Mobile dunes in the vicinity of infrastructure would need to be artificially stabilised. The knockon effects of this must be carefully considered in terms of the broader ecological functioning of the area.

Given the ecological sensitivity of both sites in the Western Cape, we suggest that, should the proposed facility be approved at either of these sites, it is imperative that the recommendations for mitigation contained in the EIR, the Environmental Management Plan (EMP) and in the specialist studies be included as conditions of approval and strictly implemented. We suggest that it must be confirmed *within this process* that the mitigation measures that have been suggested by the specialists are considered feasible. For example, it is recommended that the location of the planned facility is moved away from the sensitive and mobile transverse dunes, is this possible?

We suggest further that a biodiversity offset would be appropriate and necessary for *both sites* in the Western Cape and request that DEA advises whether this option should be explored further before environmental authorisation is considered. Although we recognise that opportunities for an on-site offset are limited at Duynefontein (sic), it is our opinion that nothing precludes the option of exploring an *off-site* offset and we strongly encourage that this be investigated further.

Response 3:

Information regarding the location of the power station

Your comments about the lack of detailed information regarding the proposed location of the power station refer. The approach followed in this EIA is precisely not to present a proposed exact location, but to provide a proposed "EIA Corridor" that would be technically preferable for the placement of the power station. The results of the EIA specialist studies confirmed which portions of the site were environmentally suitable for the placement of a power station (i.e. the power station would be placed preferably on areas of low environmental sensitivity). Thus, spatial information from all relevant disciplines (e.g. botanical, faunal, invertebrates, heritage and wetlands) on the sensitive and non-sensitive areas was overlaid to identify environmentally preferable positions for the proposed power station. The recommended positions for the power station shown in the Revised Draft EIR reflect the areas of lowest sensitivity at all three of the alternative sites.

Critical Biodiversity Areas

Your comments are noted. Please find response from the Botany and Dune Ecology Specialist, Mr. Barrie Low, below:

The City recognises Duynefontein as being a Category A CBA (Appendix E11, Botany and Dune Ecology Report, pg. 4-42). CBA's for the Bantamsklip area had not been prepared when the report was compiled.

Further, it is important to note that the main reason Duynefontein is a high priority area for the City is because of the Koeberg Private Nature Reserve, particularly due to their alien clearing programme. Eskom's efforts at Bantamsklip are also to be applauded – the site is subject to heavy acacia invasion and frequent burns, both of which are compromising the integrity and diversity of these systems.

Again, Eskom has undertaken a massive alien clearing programme, surely contributing to the overall quality of the area. Much if not most of the recommendations contained in the CBA layers are impractical to implement, certainly in terms of the high costs involved and the limited resources of private landowners.

Conservation value of the dunes at Duynefontein

Your comments are acknowledged. Both the geomorphological value and biodiversity value of the transverse mobile dune system at Duynefontein have been assessed. From a geomorphological perspective the dune system was assessed not to be of critical importance, as there are better protected and larger intact and functioning mobile dune systems further north on the West Coast of the Western Cape. From a biodiversity perspective, the dune system was not found to contain unique species of high conservation value, but it is valued from an ecological process perspective. It is in recognition of this value (in spite of the geomorphological finding that the dune system has a low conservation value) that it is recommended in the Revised Draft EIR that the proposed Nuclear-1 power station should be located to the east of the mobile dune system at Duynefontein.

It is noteworthy that Koeberg Nuclear Power Station (KNPS) was developed within the mobile dunes and that the current status of the dunes is the result of stabilisation that was carried out for the KNPS. The functioning of the mobile dune system at Duynefontein is therefore far from natural.

Considering that neither Duynefontein nor Bantamsklip are recommended for authorisation in the Revised Draft EIR, the EIR has not focused on establishing the feasibility of the proposed mitigation measures for the Duynefontein site.

Biodiversity offset

Your suggestion for an offset is noted. The Department of Environmental Affairs, the relevant decision-making body in this instance, will be alerted of your recommendation for a conservation offset. Please note in terms of the requirements of the National Environmental Management Act, 1998 (Act No. 107 of 1998), the decision-making authority is required to consult all other organs of state who have any forms of interest or jurisdiction over the matter concerned, and that CapeNature would have the right to make representations to the DEA on the proposed for a conservation offset during the DEA's review of the Environmental Impact Report.

Comment 4:

Protected area status

Not only are both sites in the Western Cape ecologically sensitive, but they have also both been declared as Private Nature Reserves (in terms of the Western Cape Nature and Environmental Conservation Ordinance, 1974 (Ordinance 19 of 1974). This poses some significant environmental and *administrative constraints* to development of these sites. According to Section 12 of the Protected Areas Act, a protected area which was reserved or protected in terms of provincial legislation for any purpose for which an area could, in terms of this Act, be declared as a nature reserve or protected environment, must be regarded to be a nature reserve or protected environment for the purpose of this Act. The definition of Nature Reserve in the Act also includes "an area which before or after the commencement of this Act was or is declared or designated in terms of provincial legislation for a purpose for which that area could in terms of section 23(2) be declared as a nature reserve". *It can safely be assumed given the biodiversity value of both sites, these would both be deemed a Nature Reserve in terms of the Protected Areas Act.*

This Nature Reserve status means that the Minister or MEC must assign a management authority for the Nature Reserve (section 38) and a management plan must be prepared, with consultation with interested and affected parties and organs of state and submitted to the MEC or Minister for approval (section 39). As far as this office is aware, no management authority has been assigned for either site and while we understand that a management plan has been drafted, this has not been approved by the MEC.

According to Section 50 (1)(a) the Act the management authority of a nature reserve *may, subject to the management plan* of the reserve of site, carry out or allow a commercial activity or an activity aimed at raising revenue in the reserve. However, Section 50(2) also indicates such an activity may

not negatively affect the survival of any species in or significantly disrupt the integrity of the ecological systems of the nature reserve.

As no *approved* management plan exists, no commercial activity should be permitted until a management plan is approved by the MEC and takes into account any planned commercial activities (which would include electricity generation facilities and any infrastructure associated with this). Importantly, it must be demonstrated that the activity will not negatively affect the survival of any species in or significantly disrupt the integrity of the ecological systems of the nature reserve. This may be hard to do in the case of the proposed Nuclear 1 facility, where a biodiversity offset may be required to achieve this for both sites.

Eskom needs to meet the above requirements or deproclaim the reserve (or parts thereof) *before they may commence* with the proposed activity. While this may not be an insurmountable obstacle (although CapeNature is unlikely to support the deproclamation of large portions of either site), there are certain administrative requirements that must be met before development can be considered on these sites.

The protected area status also has implications for the no-go alternative and how this should be assessed in this EIA process.

Response 4:

Only the Duynefontein site has been declared as a Private Nature Reserve. Farm Duynefontein No. 34 was declared as a Private Nature Reserve in terms of Section 12(4) of the Nature and Conservation Ordinance, 1974 (Ordinance 19 of 1974).

Bantamsklip is not registered as a Private Nature Reserve, but Eskom has registered it voluntarily as a Natural Heritage Site under the (now defunct) Natural Heritage Site programme of the Department of Environmental Affairs.

Eskom submitted management plans for the Duynefontein and Bantamsklip properties to CapeNature for approval in March 2012. The management plans were subsequently lost by CapeNature and a copy was immediately supplied to them. At the time of responding to your comments the approval of the management plans is outstanding.

Eskom is aware that the status of an approved management plan may place restrictions on the use of the land and that there are restrictions on commercial activities. However, Section 41(2)(g) of the National Environmental Management: Protected Areas Act (NEM:PAA), 2003 (Act No. 57 of 2003) stipulates that a management plan must include "*zoning of the area indicating what activities may take place in different sections of the area, and the conservation objectives of those sections.*". This recognises that different parts of a protected area may have different objectives, based on their environmental sensitivity and conservation status, and that strict conservation objectives may apply only to specific sections of a protected area.

Eskom takes note of the restriction in Section 50(2) of the NEM:PAA that activities may not negatively affect the survival of any species in or significantly disrupt the integrity of the ecological systems of the nature reserve. One of the purposes of the Nuclear-1 EIA has been to confirm whether Nuclear-1 would affect the survival of any species or disrupt the integrity of ecological systems. Findings of the EIA process thus far indicate that there are no environmental fatal flaws associated with either the Duynefontein or Bantamsklip sites.

Comment 5:

Restrictive conditions in appeal decision

The appeal decision dated 23/11/10 regarding a training centre is planned on Cape Farm No. 34, Duynefontein includes a condition that "*...before any further development on Cape Farm 34 is submitted for environmental authorisation, the applicant must submit its management plan for its private nature reserve to CapeNature for approval and must enter into a stewardship agreement with Cape Nature*" (emphasis added). Unfortunately there has been little progress in this regard. Once

again, this is not an insurmountable obstacle, but does have implications for the further consideration of this site at present.

Response 5:

In response to the authorisation of the Koeberg Training Centre, Eskom met with CapeNature and indicated that it is willing to enter into a first tier stewardship programme on Farm 34. This proposal was not acceptable to CapeNature as they wanted a stewardship agreement of the highest level on the entire property under Eskom's control at the Duynefontein site.

Eskom representatives then arranged a meeting with Ms Willeen Olivier of the Department of Environmental Affairs and Helen van der Westhuizen of CapeNature to discuss this issue. At this meeting Eskom explained in detail why the environmental authorisation condition of the Training Centre cannot be expanded to include all of the land under Eskom's control at the Duynefontein site. Eskom also made it clear that the organisation cannot enter into a stewardship programme that will prevent Eskom in any way from using the site for the expansion of the nuclear programme or for other uses related to Koeberg Nuclear Power Station.

Eskom also explained that the National Key Point Act and the National Nuclear Regulator Act governing Eskom's activities on the Duynefontein nuclear site will always take precedence over any agreement with CapeNature or any other environmental organisation.

Eskom also discussed the possibility of a stewardship agreement on an additional property that Eskom is in the process of acquiring. CapeNature inspected the property in September 2012 and at the time of writing this response, Eskom were awaiting their decision.

Comment 6:

Conclusion

It is CapeNature's opinion that this process has been severely constrained by limiting the site alternatives available for consideration. Further, it is our opinion that the alternatives put forward were identified based on informants which are largely outdated. This has resulted in unfortunate conflicts and administrative constraints. We urge that site selection for any further nuclear facilities planned is based on up-to-date and transparent criteria. CapeNature will gladly assist with the ecological screening of potential new sites in the Western Cape.

It is also CapeNature's opinion that this process has been compromised by separating the assessment of the impacts of the proposed nuclear plant, from its associated infrastructure. As a result the true impact of the proposed facility cannot be fully understood. CapeNature reserves the right to revise initial comments and request further information based on any additional information that might be received.

Response 6:

Your comments regarding site alternatives are noted and your offer of assistance for the identification of potential new sites is gratefully acknowledged.

The sites considered as alternatives for the Nuclear-1 EIA were identified during the Nuclear Sites Investigation Programme (NSIP), a process which included a number of criteria, including environmental, technical and other. An extended process (at least five years) is required to confirm a site's seismic suitability for a nuclear power station. Therefore, there are constraints with regards to the addition of new sites for consideration in the EIA process. Furthermore, project planning for large construction projects typically includes a pre-feasibility and feasibility assessment prior to detail planning and environmental impact assessment. Considering that the NSIP was focused on initial identification of potential nuclear power station sites, it should be regarded as an initial feasibility or even pre-feasibility study. The socio-economic realities that underlie the choice of sites in the Western Cape and Eastern Cape have not changed to such an extent since the NSIP was undertaken that the major load centres (centres of electricity demand) in the Eastern and Western Cape (Port Elizabeth and the Cape Metropole) have changed. Therefore, the location of power station sites in each of these

regions (close to the Cape Metropole and close to Port Elizabeth) therefore remains as valid today as it was when the NSIP was undertaken. Whilst not all relevant ecological data was available at the time that the NSIP was compiled, extensive and in-depth specialist assessments have been undertaken for the Nuclear-1 EIA process and these assessments have confirmed that there are no fatal flaws at any of the alternative sites.

With regards to the separation between the EIAs for the power station and the transmission lines, please refer to Response 2.

Yours faithfully
for GIBB (Pty) Ltd

A handwritten signature in black ink, appearing to be a stylized 'E' or similar character, located below the typed name.

The Nuclear-1 EIA Team