

THYSPUNT ALLIANCE

NUCLEAR 1

REVISED DRAFT ENVIRONMENTAL REPORT

COMMENT ON IMPACT ASSESSMENT METHODOLOGY, CHAPTER 7

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Impact Assessment criteria are essential components in the EIA process, and indeed appear to determine whether or not there are fatal flaws. Specialists are required to evaluate impacts on their areas of discipline in terms of these criteria.

The Peer Group Assessment, Appendix H, section 2.3.1, pages 13 – 15, comments in the last paragraph of p.14 that “the use of the rating criteria is complex, inconsistent and in some instances very difficult to understand.” On p. 15 para 3 he states: “The net effect of all of the above is that it is very difficult to determine which impacts are really significant for decision-making and which are not. With the significance rating presented as it is currently, none of the sites appear suitable for the development, yet the conclusion is still drawn that all are suitable.”

DEIR 2 has made a number of changes to the criteria in Table 7 – 16 of the Revised Report. This is in response to a complaint by I&APs in the first draft that the criteria as published in Table 7 - 10 did not allow anything more than “medium” significance where “extent” and “duration” were medium or lower. “Extent” could only be high if it was regional or national, and “duration” could only be rated above low if it was for more than 9 years. This impacted on all the other categories further down the scale, and meant that the highest possible significance was “medium”. This was clearly not acceptable.

Changes

The criteria for “Extent”, “Duration” and “Consequence” have been materially altered. The changes to “Extent” and “Duration” are positive, , but this is immediately countered by the “consequence” criteria, which have been materially altered. These continue to affect all the categories which follow.

Under the previous criteria, “**Extent**” recognised three categories. “Low” covered only the footprint; “Medium” covered the footprint and surrounding areas and towns, with no distance stated. “High” covered provincial and national impacts. On this basis, it was reasonable to categorise “extent” of the impact of Thyspunt on the St Francis area as “medium”.

The major change in Table 7-16 is that “medium” covers the surrounding area and towns **up to a distance of 10 kilometres**. Anything beyond that is categorised as “high” impact. Since both Cape St Francis and St Francis Bay are more than 10 kilometres from the site, any impact on them places them in the “high impact” category for “extent”. This addresses one of the complaints in our response to Table 7 – 10.

Much the same applies to “**duration**”. Under the previous criteria, depending on which table one was using, “Low” was anything of up to nine years’ duration; “Medium” was from 10 – 15 years and “high” was 15 – 60 years. Under the new criteria outlined in Table 7 -16, “low” is 0 – 3 years, “medium” is 4 – 8 years, and “high” is 9 years to permanent. On this basis, with a nine-year construction period “duration” should be classed as “high” impact. Here again, this addresses the complaint with regard to 7 -10

On the other hand, the explanatory notes below Table 7-16 revert to the previous criteria of medium extent in undefined surrounding areas, and low duration of up to nine years. The contradiction needs to be addressed.

“**Intensity**” is a much more subjective category, but is a crucial component in the ranking process. According to the explanatory notes in 7 -10 & 7-16:

“This is a relative evaluation within the context of all the activities and the other impacts within the framework of the project. Does the activity destroy the impacted environment, alter its functioning, or render it slightly altered? The specialist studies must attempt to quantify the magnitude of the impacts and outline the rationale used

According to this definition a “high” impact rating will only occur where the impact will “destroy the impacted environment”. It makes no distinction between “natural” and “social or cultural” impacts.

This is defined differently in Table 7-16 itself, where intensity is defined in terms of impact on the environment and social functions.

Medium Intensity is defined as *“alteration of the natural environment, but natural, cultural and social functions and processes continue, but in a modified way, and valued, important, sensitive or vulnerable systems or communities are negatively affected.”*

High intensity is expressed in similar terms, but here *“natural, cultural or social functions and processes are altered to the extent that the natural processes will temporarily or permanently cease; and valued, important, sensitive or vulnerable systems or communities are substantially affected.”*

Analysis of this section shows it to be highly subjective and ambiguous. Who decides whether communities are valued, important, sensitive or vulnerable? Is there any community that is not valued by someone? The word “and” between the two sections raises all sorts of questions. Will a high intensity only be allotted where both groups of criteria are met, or is this an either/or situation? It is not difficult to imagine an impact which substantially affects groups or communities without destroying natural processes.

Intensity is a key criterion in the overall context. Under the revised criteria, unless it is high, there can be no high rating for consequence and ultimately for significance. The criterion appears to be addressed at impact on the natural environment. How Social Impact is accommodated is not clear. Total destruction of the social environment is such an extreme criterion that it could hardly ever be argued.

In table 7-10 of the first draft, one of the categories for declaring a high consequence could be medium intensity at a regional level, and endure in the long term. In Table 7-16, “regional” is defined as “beyond a ten kilometre radius”. Under these criteria some impacts would receive “high” consequence ratings. Other things being equal, this could lead to a “high” significance rating, with all the implications of that.

As is shown below, the criteria for “consequence” have been altered

The “**consequence**” criteria have been greatly simplified, but made more stringent. According to the explanatory notes:

The consequence of the potential impacts is a summation of above criteria, namely the extent, duration, intensity and impact on irreplaceable resources.

The new element here is “impact on irreplaceable resources”. In terms of the first DEIR table 7 – 10 “consequence” would be rated “high” where “intensity” is medium at a regional level and endure in the long term. The reference to “irreplaceable resources” came further down the list, and would have no influence on “consequence”.

This has changed in table 7 -16. Consequence will now be rated “high” where “intensity “ and impact on “irreplaceable resources” are high, together with any combination of “extent” and “duration”; or “Intensity” is rated “high”, with all of the other criteria being rated “medium” or higher. In other words, “consequence” cannot now be rated “high” unless “intensity” is high, and intensity can only be rated high where natural and other processes will temporarily or permanently cease, and communities are substantially affected.

“Intensity” is critical, but subjective, and can be manipulated. There is likely to be debate on whether intensity is high in relation to the traffic passing St Francis Bay.

Questions raised by this are:

- 1. Which is correct: table 7 – 16 or the explanatory notes?**
- 2. If Table 7 – 16, why have the explanatory notes not been revised to reflect the changes?**
- 3. What are the reasons for the change in the “intensity” & “consequence” requirements?**
- 4. Have all the specialist reports been reviewed in terms of Table 7 - 16?**
- 5. If not will the EAP have any revisions made, and their implications spelt out, before submission of the Revised EIR to the DEA?**
- 6. Have the changes made addressed the issues raised by the Peer Review Consultant regarding the problems raised in para 2?**

One of the complaints in the Peer Review was that the ratings were difficult to understand and difficult to apply. We submit that the new ones are almost worse.

The test case which follows illustrates the potential difference between the application of these criteria.

Test case

As an example, we can take an impact which would be sensitive to these changes, namely the social impact of thousands of heavy vehicle trips across the Kromme River bridge, past St Francis Bay, and up a long, fairly steep hill, as envisaged in Project Description, Table 3-14,(with errors corrected, such as Vendor staff year 4, and the incorrect totals under “total vehicles per day”). Anyone who regards this impact as less than high intensity must be deaf, blind or both. A further factor is that nobody appears to have factored in the huge increase in traffic over peak holiday periods. Unfortunately neither the Noise Specialist nor the Social Impact Specialist appear to have noticed that these will be the case, and the criteria are inconclusive.

An independent ruling is required on whether thousands of heavy-duty trucks per day (and possibly night), passing over the Kromme River bridge, through St Francis Bay, and up a long hill, and then back again, 365 days per year, constitutes high intensity impact in terms of the above criteria. The rationale for the decision must be spelt out in the public domain.

The table which follows compares the impacts in terms of the new criteria with those used in the first draft, assuming that the intensity is judged to be high, and that “sense of place” can be regarded as an irreplaceable resource. Col 1 indicates the rating in terms of the original impact assessment criteria, whilst column 2 shows the effect of the new criteria. In this case, we are concerned with road access, not with the nuclear site itself. For this reason “extent” is deemed to be “medium” impact, with the road itself being the “site”.

<u>Impact Assessment</u>	<u>First draft,</u> App E 18, Section 7.7 Table 7-10	<u>Revised draft</u> App E18 Section 7.8.1 Table 7 - 16
Nature	Negative	Negative
Extent	Local	Medium (below 10 km)
Duration	Medium	High
Intensity	Medium	High
Irreplaceable resources (Sense of place)	High	High
Consequence		
Table 7 -10 (intensity + extent+ duration)		Medium
Table 7 – 16 (intensity +extent+duration+irreplaceable resources)		High
Probability	Highly probable	Highly probable/certain
Significance		
Table 7 -10 (consequence + probability)	Medium	
Table 7 – 16 (all impacts, including potential cumulative. Cumulative no longer defined, but included in significance)		High to very high
Reversibility	Low	Zero unless road access diverted
Confidence	High	High
Cumulative impacts	Medium	see Significance

In terms of Section 7.8.1 of Chapter 7, p.7 -36, a high rating “*would strongly influence the decision to proceed with the proposed project, regardless of the mitigation measures*”.

Let us consider the proposed mitigation measures anyway.

Proposed Mitigation measures (Revised Social Assessment Report, p.174)

1. “*Plan construction activities to minimise disruption to peak traffic*”.

Unmitigable. Peak traffic times common to community & construction activities.

2. *“Workshop with relevant parties to discuss problems and implement relevant improvements”.*

Toothless talk shop. What status? What relief? Who arbitrates disputes? Too late by then.

Problem areas should be identified prior to ROD and realism of proposed mitigation measures taken into account in determining a decision to proceed.

Alternative route to avoid the problem the only possible effective form of mitigation.

3. *“Implement mitigation measures in traffic impact assessment.”* App E 25, p.91

Only relevant proposal: limit bulk of abnormal loads to 21h00 – 05h00.

Abnormal loads not defined. Sleepless nights for entire community for ten years?

4. *“Mitigate impacts on pavement loading by “possible” contribution to roads rehabilitation programme by Eskom”.*

Why only “possible”? Eskom’s transportation proposals will destroy all but the most highly specified roads.

This has to be a contractual obligation.

How enforced? To what standard?

Comment on mitigation measures

These pay no more than thumb-suck lip-service to the mitigation requirements. The reality is that if the R330 is used for heavy construction vehicles, this will have an unmitigable impact of very high significance on one of South Africa’s successful holiday resorts & tourism destinations. The mitigation measures proposed are almost puerile. They will have minimal effect on the impacts which have been identified, and will most certainly not solve the problems. They are worthless.

Conclusions in test case

1. **In terms of the Impact Assessment Criteria contained in Section 7.8.1 of Chapter 7, the decision-making authority must consider whether the proposed use of the R330 for main traffic access to Thyspunt is not fatally flawed in terms of its social impact.**
2. **It is essential that remaining ambiguities in the impact assessment criteria be resolved, and that all reports are reviewed for consistency with the revised criteria in Table 7 -16.**

- 3. If it is concluded that the use of the R330 is fatally flawed, Eskom should be instructed to identify another main access route, situated a minimum of 1 kilometre from any urban edge, or regard this as a fatal flaw.**

Conclusions on Impact Assessment Methodology

This assessment derives from criticism raised by the Peer Review in Appendix H of the first DEIR. The specific criticisms are outlined in the second paragraph of this submission, namely inconsistency and difficulty to understand and apply . The question raised is whether the revised version reflected in Table 7 -16 has improved or aggravated the situation, and whether this affects the drawing of correct conclusions regarding impacts. We believe that the criticisms remain. It is yet another example of a sloppy approach, which allows too much room for misunderstanding and manipulation in a crucial component of the overall EIA.