

STRATEGIC ENVIRONMENTAL ASSESSMENT
FOR EXPANSION OF ELECTRICITY GRID
INFRASTRUCTURE IN SOUTH AFRICA

APPENDIX B

Peer Review Sheets and
Specialists Responses

Appendix B: Peer Review Sheets and Specialist Responses

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1. Integrated Biodiversity and Ecology Assessment (Terrestrial and Aquatic Ecosystems, and Species) – Fynbos Biome

Peer Reviewer: Professor Brian W. van Wilgen; Academic/Researcher (associated with the University of Stellenbosch)

EXPERT REVIEW AND SPECIALIST RESPONSES: Fynbos Biome - EGI Expansion					Change has been effected in the report
					No change has been effected in the report (i.e. not required and supported by response by Specialist)
Expert Reviewer Name	Page Range	Line/s	Table/ Figure	Expert Reviewer Comments	Response from the Specialist
Brian van Wilgen	2	2 to 13		List of acronyms - it would be useful to add CBA1, CBA 2 etc. with definitions	Added as requested
Brian van Wilgen	3	1		Comments with questions for Eskom to answer indicate some uncertainty - this will have to be cleared up?	<p>These were the comments posed to Eskom:</p> <ol style="list-style-type: none"> 1. Will access be required just to sets of pylons or will a continuous road system stretching the full length of the route be required? 2. Draft plans for the EGI indicate that the only substation planned for this Expanded Eastern EGI Corridor would be near Springbok which is in the Succulent Karoo. Eskom to please confirm if this is correct or if additional substations are proposed within this corridor? 3. Eskom to confirm vegetation trimming requirements as this will have an implication in terms of the impacts. <p>Response to Point 1 - Eskom provided the following feedback: Access will be a continuous road system stretching the full length of the power line route. Response from CSIR: The specialist assessment has covered road construction and did not specifically mention assuming access to pylons only. The report does not need to be amended. Specialist Response: I agree that the report can stand but it is clear that this could increase the impacts, especially on small highly sensitive areas.</p> <p>Response to Point 2: Eskom feedback is pending. Response from Specialist: Any future sub-station is almost certainly going to be placed near an existing town given that mining in this area is declining and all the towns are in the Succulent Karoo except for some tiny settlements (e.g. Kamieskroon). There is a range of sensitivities of the fynbos in the corridor. There is a very small probability that a substation will be placed in one of the tiny - all sensitive - pieces of fynbos in this corridor as the fynbos occupies less than 5% or so of the entire area of the corridor.</p>

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Expert Name	Reviewer Name	Page Range	Line/s	Table/ Figure	Expert Reviewer Comments	Response from the Specialist
						Response to Point 3: Eskom provided various vegetation management documents. It seems like mowing and trimming of vegetation below the powerline does occur. Response from Specialist: The current vegetation types do not seem to be specifically mentioned by name, but there are vegetation types which are clearly of a similar type based on their names and descriptions. From the descriptions and the recommended treatments, I can infer the following general principles: (a) Remove tree species where they occur in the pylon corridor; and (b) where shrub species can grow 2m or more tall, they must be cut back to 500 mm high. Trees are only likely to occur along water courses, which are covered in a separate specialist study, or in the Kamiesberg area. In the latter case the trees would occur as scattered individuals or small clumps and the impact of the removal of a few trees is unlikely to have a significant impact. Since the shrubs in the fynbos vegetation in the corridor rarely if ever exceed 1.5 m tall it would seem that cutting is not necessary.
Brian van Wilgen		3	41		"populations of various species within the corridor that need to be excluded" - do you mean "areas with populations of various species within the corridor that need to be excluded"?	Yes, I meant the latter
Brian van Wilgen		4	2		"a couple of guidelines" - do you mean two? Or "a few"?	Few
Brian van Wilgen		4	4		Replace "simulate" with "stimulate"	Corrected
Brian van Wilgen		4	11 to 12		It is suggested that a poor understanding of the potential for restoration provides a "strong rationale" for siting the infrastructure elsewhere. But will the potential for restoration in these alternative areas also be poorly understood - in which case you are simply transferring the problem elsewhere? Or do you mean choose alternative areas that are already degraded?	I was considering two things: (a) to my knowledge there is more understanding of, and more experience in the restoration, of karoo vegetation than these arid fynbos types, so the potential for restoration is greater so it is not simply transferring the problem elsewhere; (b) the proportional impact on the areas of the Succulent Karoo vegetation types will be less as the reasonably intact extent of these vegetation types is much greater. Obviously, if there are already degraded areas which are otherwise suitable then they should be the 1st choice for the route. I see no need to modify the existing text.
Brian van Wilgen		5	24		Associated fauna - does this exclude birds?	(excluding avifauna) has been added
Brian van Wilgen		5	46		Replace "conservation planning priorities" with "conservation priorities"	"planning" deleted

EXPERT REVIEW AND SPECIALIST RESPONSES: Fynbos Biome - EGI Expansion					
Expert Reviewer Name	Page Range	Line/s	Table/ Figure	Expert Reviewer Comments	Response from the Specialist
Brian van Wilgen	5	51		Define "LM" Local municipality? Add to list of acronyms on page 2	Change has been effected in the report No change has been effected in the report (i.e. not required and supported by response by Specialist)
Brian van Wilgen	6	28 - 29		Not clear what "areas supporting high climate change resilience" are. Do you mean areas where most species would have a better chance of surviving predicted changes in climate?	Spelt out on 1st occurrence, added to acronyms
Brian van Wilgen	8	45-46		Replace "experts should sit together and come up with" with "experts should collaborate to develop"	Added an explanation "(i.e. climate change adaptation corridors)"
Brian van Wilgen	9	14 - 17		"It is vital that those who will use this information understand and appreciate these issues when taking it into account in making decisions about the routes of the powerlines." The reality is that "those who will use this information" are unlikely to understand and appreciate these issues. Therefore, the chances of offsetting these impacts is small, and this reality needs to be recognised here and spelt out when plausible mitigation is discussed?	Wording changed as suggested
Brian van Wilgen	10		Table 3	Are there any parts of the fynbos biome within the corridor that are Ramsar sites, or World Heritage Sites? If not, these rows are redundant?	While I accept that it is likely that those making the decision about the routing may not have the necessary expertise, in specifying "those who make the decision" I was taking into account that there will be a second level of study which tests and selects routes. This study will be much more detailed and will include inputs from specialists who will appreciate the issues I am raising and factor them into the decision making at that stage. This, I believe, will increase the chances of offsetting these impacts.
Brian van Wilgen	13	28		The term "borrow pits" suggests that material will be borrowed and later replaced. However, "permanent excavations" is probably a more appropriate term?	There are no Ramsar sites within the corridor but the World Heritage sites include the fynbos in the Richtersveld. I kept the Ramsar in for completeness sake.
Brian van Wilgen	13		Figure 1	It is not clear what the "development envelope" is.	Technically you are correct; I was using the accepted term in the construction industry. I have added permanent excavations in the text.
					I was using the term used in the cited reference, it is also clearly labelled in Figure 1

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Expert Reviewer Name	Page Range	Line/s	Table/ Figure	Expert Reviewer Comments	Response from the Specialist	
Brian van Wilgen	13	44 - 45		Query to Eskom needs to be clarified	Response to Point 3: Eskom provided various vegetation management documents. It seems like mowing and trimming of vegetation below the powerline does occur. Response from Specialist: The current vegetation types do not seem to be specifically mentioned by name, but there are vegetation types which are clearly of a similar type based on their names and descriptions. From the descriptions and the recommended treatments, I can infer the following general principles: (a) Remove tree species where they occur in the pylon corridor; and (b) where shrub species can grow 2m or more tall, they must be cut back to 500 mm high. Trees are only likely to occur along water courses, which are covered in a separate specialist study, or in the Kamiesberg area. In the latter case the trees would occur as scattered individuals or small clumps and the impact of the removal of a few trees is unlikely to have a significant impact. Since the shrubs in the fynbos vegetation in the corridor rarely if ever exceed 1.5 m tall it would seem that cutting is not necessary.	
Brian van Wilgen	14	2		Clearing will not only result in loss of habitat, but could also eliminate species not able to survive repeated cutting?	Yes, thank for the comment, added into text	
Brian van Wilgen	14	16 - 18		Ensuring that construction material does not contain colonies of a certain ant species will require capacity and expertise that is highly unlikely to be available. It is therefore likely that construction may result in introductions. Is the distribution of the Argentine ant known? And is construction material likely to be sources from known infested areas? It is probably also better to only list the impact in section 4 and the potential for mitigation in section 8.1 (for this and all other impacts)?	I do not think this is an unreasonable request, the screening was done successfully for the Kogelberg Pump Storage Scheme and has been done since. The Argentine ant's distribution is not well known but it is unlikely to occur in such arid areas except in close proximity to water sources and/or human habitation (it is known to occur in Springbok and the surrounds. Because I consider it a minor impact I did not include it among the those addressed in section 8.1	
Brian van Wilgen	14	25		Replace "maintain themselves" with "persist".	Change made	
Brian van Wilgen	14	28		What are the acceptable intervals and times of the year for fires?	The following sentences have been added: The optimal seasons for burning are summer or autumn but the desired intervals between fires are not known at present. Expert advice should be obtained before conducting any planned fires".	
Brian van Wilgen	14	39 - 42		See comment on page 4, lines 11 to 12.	Covered in my response to that comment	

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Brian van Wilgen	14	46 - 47		The alien species listed here differ from those listed in the summary - for example they include Prosopis and do not include pines, hakea and leptospermum. This needs to be rationalised. Suggest you consult SAPIA to see which alien plants occur in the grid corridors.	The list in the summary has been harmonised	
Brian van Wilgen	15	5 to 9		These are proposed mitigation actions and should be moved to section 8.1?	This is a general recommendation and not a mitigatory action so it has been retained where it is.	
Brian van Wilgen	15	12		Why "but"? Why not "and"?	Rephrased	
Brian van Wilgen	15	15		How likely is it that alien plant invasions will alter fire regimes? And which elements of fire regimes may be altered? Introduction of alien grasses to the karoo may introduce fire to previously fire-free ecosystems, but is this true for fynbos? Invasion by large trees such as pines could increase fire intensity (but not season or frequency) but it is not clear whether the drier fynbos areas are under threat from invasion by pines?	I believe grass invasions can have undesirable effects on the fire regimes - similar to those in semi-arid environment in the USA. Invasion and eventual dominance by annual grasses can create continuous fuel beds that can carry fires well before arid fynbos reaches the stage where all the reseeding species have replenished their seedbanks. So, fires would not be a novel event, but frequent fires would be, and This could result in the loss of many reseeding species. Invasions by pines have not been recorded in these arid fynbos areas but have been noticed elsewhere in arid fynbos.	
Brian van Wilgen	16	29		Insert "by" between "supplied" and "SANBI"	Corrected	
Brian van Wilgen	18		Table 4	Are there any parts of the fynbos biome within the corridor that are Ramsar sites, or World Heritage Sites? If not, these rows are redundant? Please spell out CBA1, CBA2 etc.	See my response to the comment on pg 10. The mnemonics are defined in the glossary	
Brian van Wilgen	20		Table 5	There are no zebras, rhinos, wild dogs or cheetahs in the fynbos? Nor any of the antelopes mentioned (bontebok are limited to the southeastern parts of the fynbos biome)? Nor crocodiles.	The full list of buffer widths was retained for completeness sake.	
Brian van Wilgen	22		Figure 2	It appears that the EGI is buffered in only one direction (to the east and south). Is this correct? Same comment applies to the other figures in this series.	That is correct because the northern border is the South African border and the west is the coastline	

EXPERT REVIEW AND SPECIALIST RESPONSES: Fynbos Biome - EGI Expansion					
Expert Reviewer Name	Page Range	Line/s	Table/Figure	Expert Reviewer Comments	Response from the Specialist
Brian van Wilgen	28		Section 8.1	It would be useful here to differentiate between destruction (where vegetation is permanently replaced by infrastructure), disturbance (e.g. mowing or burning, or activities during construction), and fragmentation (where the suitability of remaining, undisturbed habitat is compromised due to a reduction in its extent). This differentiation should be carried forward into Table 7.	Change has been effected in the report No change has been effected in the report (i.e. not required and supported by response by Specialist)
Brian van Wilgen	28	32 - 38		The real question here is whether or not the vegetation has to be managed at all. The risk is that the vegetation may burn, and cause power outages, and this risk can be reduced if the vegetation is regularly burnt, or mowed. If the risk of a fire occurring is low, none of this management would be necessary. However, if the risk is high, then the choice should be between prescribed burning under milder conditions, or mowing. Prescribed burning would be preferable as it would almost certainly do less harm to the vegetation.	While I understand the value of this differentiation it would result in a lot of additional detail and would not add significant value to the assessment. I believe that this is something that can be done during the route selection phase for high sensitivity areas.
Brian van Wilgen	29		Table 7	"Impact will also include electrocution of snakes". Should this not rather be "may also include"? Do snakes climb power pylons?	I believe the vegetation does need to be managed for two main reasons. (1) Monitoring it to make sure that the rehabilitation has been successful and intervening if it has not been; (2) Ongoing management of invading species at least in areas where they occurred or were introduced. Management using fire may not be necessary but, if there are species whose seeds require fire, then excluding fire will result in the loss of these species; burning definitely is the preferred option but needs to be carefully managed to minimise the risk of interfering with the power transmission.
Brian van Wilgen	29		Table 7	Relocation of vertebrates and even invertebrates is proposed as a mitigation action, but is this realistic? If this is to be done, suitable alternative habitat will have to be found, and this will require specialist expertise. Secondly, such alternative habitat may already be fully occupied, and the relocation will fail. Given the uncertainties, should the likelihood of success of the proposed mitigation not be spelt out?	I was specifically asked to include this in an earlier draft. I have changed the wording to "may also include"
Brian van Wilgen	31		Table 7	The statement is made that rehabilitation is "typically" not successful, but elsewhere in this report the point is made that there is very little understanding about rehabilitation. Should this not then read that the probability of successful rehabilitation is unknown?	I agree that the mitigation may or may not succeed with the likelihood depending strongly on the characteristics of the species involved. Each case would have to be assessed on its own merits but at least in the case of rare or threatened species, the option of such mitigation should always be considered.
					The reviewer has misinterpreted the statement, this section (row) of the table gives some advice on what options there are should the initial intervention not succeed. Typically changed to often.

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Brian van Wilgen	31		Table 7	I fully agree that rehabilitation studies should be funded, but the point needs to be made that they should be of sufficient duration to be able to gauge success, and that there should be regular monitoring.	I agree and have added the following sentence: The duration of these studies should be sufficiently long to confirm success or failure.	
Brian van Wilgen	31		Table 7	Is avoiding cutting or mowing a mitigation action? If mowing or cutting are necessary, could they be mitigated in some way? What about prescribed burning as an alternative? See comment on page 28, lines 32 - 38.	I agree and have added this sentence: Use prescribed burning where fire risks need to be reduced, preferably with fires in the summer and at ecologically acceptable intervals.	
Brian van Wilgen	32		Table 8	In the column headed "Permits", it may be useful to say what the permits are for, and to list the legislation of regulations under which they are required.	The relevant legislation was listed in section 3 and is necessary before undertaking any actions that would disturb threatened species. I do not think further explanation is needed.	
Brian van Wilgen	33	39		Could you explain what kind of fixed barriers are envisaged?	I have added an example	
Brian van Wilgen	33	46		Not clear how or why you should reward prohibited activities?	I have made it clear that rewards are for good behaviour	
Brian van Wilgen	34	15 - 17		It is not very useful to say, under a heading of "best practice", that not much is known. Rather say that best practice would be to establish a picture of prevailing fire regimes to improve understanding, for example by keeping detailed records of all fires?	I agree, added a sentence on recording fires	
Brian van Wilgen	34	33		Not sure why it is necessary to monitor twice yearly in winter. Is once not enough? And why the switch to summer for later surveys?	I have added explanations setting out the rationale	
Brian van Wilgen	34	40		Define the acronym IAPs and add to list on page 2.	Done	
Brian van Wilgen	34	37		Add EMPr to list of acronyms on page 2.	Done	

2. Integrated Biodiversity and Ecology Assessment (Terrestrial and Aquatic Ecosystems, and Species) – Savannah and Grassland Biomes

Peer Reviewer: Professor Bob Scholes; University of the Witwatersrand Johannesburg

EXPERT REVIEW AND SPECIALIST RESPONSES: Savanna and Grassland Biomes – EGI Expansion						Change has been effected in the report
						No change has been effected in the report (i.e. not required and supported by response by Specialist)
Expert Name	Reviewer	Page Range	Line/s	Table/ Figure	Expert Reviewer Comments	Response from Specialist
RJ Scholes		4	3		Endemism is a well-defined technical term, but in a summary statement it is better to spell it out 'South African grasslands have a large number of species which occur nowhere else in the world.	Changed as suggested
RJ Scholes		4	3		In general, this paragraph is correct but a little unclear. Point out that it is other, prior activities which have already transformed the grasslands; thus the remaining pockets may represent critical habitat. The spatial scale of endemism in grasslands is seldom such that a single pipeline would eliminate the entire population of a species; if it were so, a simple re-alignment would suffice to avoid the problem. The paragraph raises an issue, but does not suggest a consequence or solution.	Reworded as suggested
RJ Scholes		4	23		This paragraph needs to be expanded; pointing out that the maintenance of a fire regime is often in conflict with powerline management guidelines.	Added as suggested
RJ Scholes		6	7		I infer that there is a separate specialist study on visual impacts and impact on sense of place, but you need to mention their importance here. In addition to cropping and forestry, the other big (and growing) economic activity in the grasslands and savannas of this corridor is biodiversity-based tourism, which is particularly sensitive to visual and sense of place impacts, regardless of whether they endanger the biodiversity populations directly or not. In the same way you emphasise birds and bats, although they are not treated here, you need to emphasise how unacceptable a large powerline would be in a major protected area or scenic landscape, with respect to the key economic activity in that landscape. Otherwise protected or conserved areas are seen as the cheap option for power corridors - often they are state owned land, so there are no servitude costs and pesky owners to deal with, and there is a mistaken perception that 'nothing is going on there'.	Added as suggested

EXPERT REVIEW AND SPECIALIST RESPONSES: Savanna and Grassland Biomes – EGI Expansion						Change has been effected in the report
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Expert Name	Reviewer	Page Range	Line/s	Table/ Figure	Expert Reviewer Comments	Response from Specialist
RJ Scholes		6	7		In a similar vein, I assume there is a specialist report on rivers and wetlands. But you need to mention the connections in this report, for two reasons: wetland and river features are sub-map scale at this strategic level so tend to get overlooked, although they are typically crucial. Secondly, you cannot separate the rivers and wetlands functionally from the matrix in which they are embedded. The actions in the savanna or grassland will impact the rivers and marshes within them, and vice versa.	Added as suggested
RJ Scholes		6	47		You do not raise the issue of the powerline being a potential source of ignition. Sparks caused by line failure are a fire hazard; minimum clearances from the ground, especially when the air temperature is high, have this in mind.	Added as suggested
RJ Scholes		8	15		The paragraph ends without suggesting any mitigative or restorative actions: cleaning of vehicles and clothing to reduce the inadvertent introduction of propagules; follow up operations to control aliens before they come to dominate.	Added as suggested
RJ Scholes		15		5	There is no reason not to label the bottom right panel 'Composite'. You need to change the legend order so that the really important dots are not overlain and obscured by the less important ones.	Panel labelled. Dots are drawn with highest priority on top.
RJ Scholes		15	6		I think figure 5 needs some interpretive text. For instance, noting that there are two corridors which mostly avoid endangered species: one on the coastal plain, but not near the coast itself, and another inland but not on the scarp.	I would prefer not to give specific advice on just this one variable as it is the composite of all biodiversity concerns given later that is important.

EXPERT REVIEW AND SPECIALIST RESPONSES: Savanna and Grassland Biomes – EGI Expansion						Change has been effected in the report
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RJ Scholes		16		6	I have some real conceptual issues when this kind of ranking scheme is applied across studies without some robust underlying calibration system. How does your very high sensitivity correspond to someone else's?	<p>This is an issue from the overall study, not just this one section.</p> <p>Response from CSIR Project Team Integrating Author: In the integrated chapter the sensitivities are checked for major discrepancies between topics. The sensitivity classes at a strategic level, act as "management and assessment units" to guide the environmental assessments needed in field and the corresponding construction, management and mitigation actions, and is based on expert opinion. Although it is recognised that a consistent underlying framework (such as a risk assessment with calibrated consequence terms) is a more robust approach, this EGI Expansion SEA is an extension of the existing EGI SEA completed in 2016 which was used to gazette Electricity Corridors in South Africa in February 2018, and as such had to follow the same methodology.</p>
RJ Scholes		19	26		...train construction staff in procedures to minimise soil, vegetation and animal disturbance, and introduce and incentive/punishment scheme that rewards best practice and provides effective individual sanction for forbidden activities such as poaching or illicit plant collection.	Added as suggested
RJ Scholes		19	38		Train and monitor operations staff in their duties with respect to biodiversity protection on the servitudes	Added as suggested
RJ Scholes		19	38		Monitoring the fire regime on and around the servitude is an easy and necessary thing to do, given that you have highlighted it as an issue; they should also monitor vegetation height and fuel load.	Added as suggested

3. Integrated Biodiversity and Ecology Assessment (Terrestrial and Aquatic Ecosystems, and Species) – Indian Ocean Coastal Belt Biome

Peer Reviewer: Duncan Hay, Catherine Pringle, and Leo Quayle, Institute of Natural Resources

EXPERT REVIEW AND SPECIALIST RESPONSES: Indian Ocean Coastal Belt Biome - EGI Expansion					Change has been effected in the report
					No change has been effected in the report (i.e. not required and supported by response by Specialist)
Expert Reviewer Name	Page Range	Line/s	Table/ Figure	Expert Reviewer Comments	Response from Specialist
Catherine (Kate) Pringle	1	2		Infrastructure is spelt incorrectly	Done
Catherine (Kate) Pringle	3	9-31		The following acronyms appear in the list but are missing from the text: PCE	Corrected. PCE is not applicable.
Catherine (Kate) Pringle	6	1-24		Is the summary meant to provide background or be an executive summary? If the latter, then the following information is missing: where is the IOCB, what methods were used in the assessment of potential impacts, what were the key findings, and what are the recommendations?	Minor addition made
Catherine (Kate) Pringle	6	12		The IOCB is characterised by given diverse... The word given should be removed.	Done
Catherine (Kate) Pringle	6	33		"Evaluate and recommend" may read better as "evaluate and provide recommendations on.."	Done
Catherine (Kate) Pringle	7	21		The should be this	Done
Catherine (Kate) Pringle	7	21-25		This is a very long sentence. I would suggest putting a full stop after impacts and starting the next sentence as follows: "It also offers opportunities to ameliorate..."	Addressed
Catherine (Kate) Pringle	7	35		with should be within	Done
Catherine (Kate) Pringle	7	35		There is a double space after avifauna	Done
Catherine (Kate) Pringle	9	5		There should be a full stop at the end of this bullet.	Done
Catherine (Kate) Pringle	10		Table 1	Re Ecoregion data. The data source is given as SANBI, but no date is provided. Please include the date.	Corrected
Catherine (Kate) Pringle	11	30-31		The text states that "the assumption is the forest biomes will largely not be considered for the development of the gas pipeline". Has this assumption been agreed? And is the agreement documented somewhere? If so, the relevant reference needs to be provided.	Not applicable to EGI. Has been removed.

EXPERT REVIEW AND SPECIALIST RESPONSES: Indian Ocean Coastal Belt Biome - EGI Expansion					Change has been effected in the report
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Expert Reviewer Name	Page Range	Line/s	Table/ Figure	Expert Reviewer Comments	Response from Specialist
Catherine (Kate) Pringle	12	4		I presume the second sentence relates to the impact of rapid land transformation on the accuracy of the data? I suggest that you re-word this sentence to make this more explicit.	Reworded
Catherine (Kate) Pringle	12	13-21		Section 4.3.4 is a bit misleading when you read it for the first time without having read the rest of the report. The first time I read it; it seemed to imply that data on fauna was not considered, when in fact it was. I would suggest that you start this section by saying that fauna were considered using xxx data. However, other data on fauna, such as direct observations were excluded from the assessment as this data is based on observation records which are skewed to particular places such as protected areas etc.	Numerous changes made to this section. Hopefully it improves the clarity.
Catherine (Kate) Pringle	12	24		It is not clear how section 4.3.3 and section 4.3.5 differ from one another. Do they both relate to the impact of rapid land transformation on the accuracy of the data? Similarly, the problems with the faunal data are repeated.	This section has been reworked
Catherine (Kate) Pringle	12	29		This sentence requires a reference. I suggest Jewitt D, Goodman PS, Erasmus BFN, O'Connor TG, Witkowski ETF. Systematic land-cover change in KwaZulu-Natal, South Africa: Implications for biodiversity. S Afr J Sci. 2015;111(9/10), Art. #2015-0019, 9 pages. http://dx.doi.org/10.17159/sajs.2015/20150019	Done
Catherine (Kate) Pringle	13		Table 2	All Acts in this table should have the Act No and date included e.g. National Environmental Management: Protected Areas Act 57 of 2003.	Done
Catherine (Kate) Pringle	13		Table 2	There are several instruments which are relevant but have been omitted from this table. For example, the Convention on Biodiversity should be included under international instruments. At a National level, the Constitution should be listed, with specific reference to Section 24. NEMA should then be listed first as it gives effect to the Constitution. Following NEMA should be all the specific environmental management acts (SEMAs). These include the ones that you have listed plus the Integrated Coastal Management Act 26 of 2008. I think you also need to list some other key national laws which have relevance e.g. National Forests Act, Sea Shore Act(?), National Heritage Resources Act.	Same comment at Gas i.e. National Forest Act was included. The coastal zone is not considered in this report. The estuarine specialist with deal with the ICMA. Any references to seashore vegetation, estuaries or coastal dynamics are purely descriptive. Not sure I follow the inclusion of the constitution? I am also not entirely sure of the applicability of the NHRA to this study - cultural and heritage resources are being covered in another study. Note from the CSIR: Relevant legislation will be detailed in the Integrated Biodiversity Assessment

EXPERT REVIEW AND SPECIALIST RESPONSES: Indian Ocean Coastal Belt Biome - EGI Expansion					Change has been effected in the report
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Expert Reviewer Name	Page Range	Line/s	Table/ Figure	Expert Reviewer Comments	Response from Specialist
					Report and SEA Report (including the chapter on Additional Impacts, which deal with Heritage Impacts (amongst other issues)).
Catherine (Kate) Pringle	14		Table 2	The KwaZulu-Natal Nature Conservation Management Act 29 of 1992 has been replaced by the KwaZulu-Natal Nature Conservation Management Act 9 of 1997.	Done
Catherine (Kate) Pringle	14		Table 2	The nature conservation laws for the Eastern Cape are not included. I think that the Cape Ordinance 19 of 1974 and the Nature Conservation Act 10 of 1987 still apply, but this should be checked.	Removed, not relevant
Catherine (Kate) Pringle	15	20		I am not sure what you mean by "species ethos"?	Behaviour
Catherine (Kate) Pringle	17	15-16		This should be a single line space.	Noted
Catherine (Kate) Pringle	20	20		Will cessation of the fire regime really occur? Surely with an increase in grass rather than shrub species, fire could increase?	Managed area, therefore no burning
Catherine (Kate) Pringle	20	26		Table 5 is missing a bracket	Done
Catherine (Kate) Pringle	21		Table 5	I presume this data is based on Mucina and Rutherford 2006. The citation should be included in the figure heading.	Done
Catherine (Kate) Pringle	23		Figure 3	I presume this data is based on Mucina and Rutherford 2006. The citation should be included in the figure heading.	Done
Catherine (Kate) Pringle	24	1		I presume that section 6.2 summarises data from Mucina and Rutherford 2006. This should be referenced accordingly.	Added
Catherine (Kate) Pringle	24	6		Figure 4 should be followed by a full stop.	Done
Catherine (Kate) Pringle	25	7		Remove comma after CB3	Done
Catherine (Kate) Pringle	28		Table 6	All descriptions in the table should end with a full stop. The relevant citation should also be included in the table heading.	Done
Catherine (Kate) Pringle	36	10-15		This paragraph is repeated in the paragraph below.	First paragraph removed
Catherine (Kate) Pringle	41	9		There is a space missing between Table 10 and provides	Done
Catherine (Kate) Pringle	43	4		Should it be the protected area network?	No. It is the same as in the Gas Report

EXPERT REVIEW AND SPECIALIST RESPONSES: Indian Ocean Coastal Belt Biome - EGI Expansion					Change has been effected in the report
					No change has been effected in the report (i.e. not required and supported by response by Specialist)
Expert Reviewer Name	Page Range	Line/s	Table/ Figure	Expert Reviewer Comments	Response from Specialist
Catherine (Kate) Pringle	43	22		This section only discusses private nature reserves. What about game farms? These may fall outside of the IOCB but if not should be included. They are very important, particularly in northern KZN where they form part of corridors and part of the black rhino expansion project.	If it falls outside the IOCB it will fall within the specific biome review. The data does include game farms, but the heading does not include this.
Catherine (Kate) Pringle	43	31		Programmes should be agreements. As I understand it, there is only one overarching Stewardship Programme in KZN.	Changed
Catherine (Kate) Pringle	45	6		The date of the National Land Cover should be included.	Dates are included
Catherine (Kate) Pringle	45	6-14		This section 7.1.10 does not discuss the field crop boundaries which are listed under land cover in Table 11. A description of this layer should be provided.	Brief description added
Catherine (Kate) Pringle	45	17		A date should be provided for the eco region layer both in the text and in Table 11	Done
Catherine (Kate) Pringle	47		Table 11	Ecoregion feature class. A date should be provided for the SANBI layer.	Done
Catherine (Kate) Pringle	47		Table 11	Re Ecoregion data. The data source is given as SANBI, but no date is provided. Please include the date.	Done
Catherine (Kate) Pringle	48		Table 12	KZN CBA Irreplaceable has only been scored as "High". I would suggest that these should be "Very high" as they are areas that are required to meet biodiversity targets.	In other areas of KZN, I agree, but, within the IOCB much of these "irreplaceable" areas have been transformed or are isolated. This particular point is being investigated further through more detailed scrutiny of the transformed and CBA data layers.
Catherine (Kate) Pringle	48		Table 12	Private nature reserves and game farms. Game farms are listed as being considered but this is not expressed in the text.	See above
Catherine (Kate) Pringle	53-54	1-21		This section focuses largely on habitat/flora. What about impacts on fauna and associated mitigation measures? These are listed in Table 13 but not discussed in the text.	Fauna sensitivities are being addressed by a separate specialist. It was stated in the report that faunal data was not incorporated into the sensitivity rating component of this report.
Catherine (Kate) Pringle	53-54	1-21		Are impacts on sense of place considered elsewhere? For example, having large lines running passed protected areas may negatively impact on the wilderness experience for visitors.	Considered by another specialist
Catherine (Kate) Pringle	53-54	1-21		I assume that the impact on birds is dealt with in a separate specialist report?	Yes
Catherine (Kate) Pringle	75-76			There are inconsistencies in the referencing styles. For example, some references include the title in inverted comma's others don't,	Addressed

EXPERT REVIEW AND SPECIALIST RESPONSES: Indian Ocean Coastal Belt Biome - EGI Expansion					Change has been effected in the report
					No change has been effected in the report (i.e. not required and supported by response by Specialist)
Expert Reviewer Name	Page Range	Line/s	Table/ Figure	Expert Reviewer Comments	Response from Specialist
				some include the journal number in brackets others don't, the publisher place is missing from all book references. All references should be checked.	
Catherine (Kate) Pringle	General query			Has Mucina and Rutherford 2006 been used synonymously with the SANBI vegetation Map 2012 throughout the report? If so, this should be made explicit.	No separately. These have been referenced accordingly
Catherine (Kate) Pringle	General query			The TOR requires that ground-truthing of specific areas within the corridors be undertaken. Has this been done? If so, how have the datasets been updated to include this information? This is not included in the text.	Same as the gas response i.e. Yes. The transformed land use layer is being reviewed in detail. Due to the nature of the IOCB, there has been a lot of interest in it an there is a lot of available data, more so KZN than the EC. One of the issues was overlap of data, more so than gaps. From early on it was clear that the IOCB is highly transformed and prioritising the transformed layer will guide and naturally refine the sensitivity layers – what is not transformed, must then be sensitive. Ground-truthing – through review of recent aerial photography and driving up and down the IOCB (not all dedicated field trips specifically for this purpose) the extent of transformation became clear as did areas where the transformation layer needed to be adjusted – basically expanded. These adjustments were minor relative to the total area i.e. closing up a small gap, or changing the shape of a polygon slightly to improve the accuracy. When viewed at the biome scale these changes are barely noticeable – an area that had small specs of red showing through small gaps, now shows fewer small specs, or no specs. As a result, the ground truthing did not add any significant data, it purely resulted in minor adjustments (and in most cases no adjustments) to existing data. Most of the results of ground-truthing have not been directly mentioned in the report as they have not resulted in anything new being presented, only confirming what is already represented or inadvertently clarifying queries or concerns raised through the review process.

EXPERT REVIEW AND SPECIALIST RESPONSES: Indian Ocean Coastal Belt Biome - EGI Expansion					Change has been effected in the report
					No change has been effected in the report (i.e. not required and supported by response by Specialist)
Expert Reviewer Name	Page Range	Line/s	Table/ Figure	Expert Reviewer Comments	Response from Specialist
Catherine (Kate) Pringle	General query			The ToR requires the "Identification of additional features". Are there any relevant planning tools, such as Environmental Management Frameworks (EMFs) which may provide additional insights?	I think what is meant by that is additional GIS features, in addition to those provided by CSIR and SANBI or characteristics of the IOCB that need to be highlighted. I don't think EMF would be applicable at this scale. Ethekewini DMOSS and similar tools are too fine scale for a biome scale review.
Catherine (Kate) Pringle	General query			The TOR requires that the National Biodiversity Assessment 2011 is considered. How has this been done?	As per gas report response i.e. Specific consideration was taken of the gazetted Threatened Ecosystems 2011
Catherine (Kate) Pringle	General query			It is assumed that soil and agriculture are considered elsewhere. If not, this is a major oversight.	Considered by another specialist
Catherine (Kate) Pringle	General query			Why did you undertake a risk assessment for the Gas pipeline but not for the EGI? Is a risk assessment not necessary?	We were provided with a set template and worked to that template. Note from the CSIR: The EGI Expansion SEA followed the same template as that of the 2016 EGI SEA, which did not include a Risk Assessment.

4. Integrated Biodiversity and Ecology Assessment (Terrestrial and Aquatic Ecosystems, and Species) – Succulent and Nama Karoo Biomes

Peer Reviewer: Professor Sue J. Milton-Dean; Renu-Karoo Veld Restoration

EXPERT REVIEW AND SPECIALIST RESPONSES: Karoo - EGI Expansion					Change has been effected in the report
					No change has been effected in the report (i.e. not required and supported by response by Specialist)
Expert Reviewer Name	Page Range	Line/s	Table/Figure	Expert Reviewer Comments	Specialist Response
SJ Milton	General comments			I fully agree with the recommendations made in this management report. Where possible the EGI should be shifted to damaged areas of the coast or to the western extreme of the defined corridor. The report is logically and clearly presented; all statements and recommendations are adequately justified and appropriately referenced. My few comments below relate to writing style or need for additional detail.	Noted.
SJ Milton	5	33		with limited mobility and those which have narrow distributions add "those which"	Noted and updated.
SJ Milton	6	19		avoid double negative after "not" Change "neither" to either , and "nor" to or	Noted and updated.
SJ Milton	19	18		I suggest you name the two Nama Karoo vegetation types here.	Noted and updated.
SJ Milton	29		Fig 6	Pity about the colour palette used as the diversity of vegetation types in the study areas does not show up clearly	Noted. Map has been updated with a clearer colour palette.
SJ Milton	31	18		Probably need to point out that many endemics have very limited spatial ranges so are vulnerable to extinction through localised habitat damage.	Noted and updated.
SJ Milton	32		Caption Table 5	contained (not comprised)	Noted and updated.
SJ Milton	48	21		typified by (not of)	Noted and updated.
SJ Milton	53			Rehabilitate: Rehabilitate using locally indigenous plant species. Where feasible translocate savage plants. Where not feasible use a seed mix that includes both annuals and perennials.	Noted and updated.

EXPERT REVIEW AND SPECIALIST RESPONSES: Karoo - EGI Expansion					Change has been effected in the report
					No change has been effected in the report (i.e. not required and supported by response by Specialist)
Expert Reviewer Name	Page Range	Line/s	Table/Figure	Expert Reviewer Comments	Specialist Response
SJ Milton	53			Rehabilitate: I tried to find out more about what you intend here and found this definition "The principles of landscape design are guidelines, or tools, that designers use to create attractive, pleasing and comfortable landscapes. The landscape design principles are proportion, order, repetition and unity". Given that most texts on landscape design seem to deal with gardening, would you please expand on these guidelines.	Noted and updated.
SJ Milton	54			Not quite sure whether the concern is that something is ingesting the wildlife or the wildlife are ingesting something. Perhaps you mean "Possible ensnarement of animals or ingestion of waste due to materials such as cables and plastic left on site"	Noted and updated.
SJ Milton	56			Remove alien invasive plants and do what with the alien plants removed?	Noted and updated.

5. Integrated Biodiversity and Ecology Assessment (Terrestrial and Aquatic Ecosystems, and Species) – Estuaries

Peer Reviewer: Professor Janine Adams; Nelson Mandela University

EXPERT REVIEW AND SPECIALIST RESPONSES: Estuaries - EGI Expansion					Change has been effected in the report
					No change has been effected in the report (i.e. not required and supported by response by Specialist)
Expert Reviewer Name	Page Range	Line/s	Table/Figure	Expert Reviewer Comments	Response from the Specialist
Janine Adams	whole document			Don't use etc., check throughout document	This has been corrected throughout the report
Janine Adams	pg 10			This will set targets for use of specific chemicals in marine waters....	This has been updated
Janine Adams	pg 21	14		every estuary along this coast	This has been corrected on Page 22 (assumed peer reviewer is referring to page 22 - as for the Gas Report)
Janine Adams	pg 22	44		which are located within the EFZ and close to....	This has been updated
Janine Adams	pg 29, 30		Figures 5 & 6	Change sensitive to Sensitivity map	This has been corrected - it is assumed the peer reviewer is referring to Figure 6 and 7.
Janine Adams	pg 33	13-14		The nett result is that infrastructure will over time be exposed to erosion.....	This has been corrected
Janine Adams	pg 41	21		any estuarine ecosystem	This has been corrected
Janine Adams	pg 43	31		where required	This has been corrected
Janine Adams	pg 48	18		monitor	This has been corrected
Janine Adams	pg 48	22-23		Without this detailed estuary-specific sediment process understanding, predicting impacts of any structures within an estuary EFZ is difficult.	This has been corrected
Janine Adams	pg 49-53			check that species names are in italics	This has been corrected
Janine Adams	pg 49			correct spelling of Fernandes	This has been corrected
Janine Adams			OVERVIEW	The report is technically sound, these review comments relate only to typos and formatting.	Noted

6. Integrated Biodiversity and Ecology Assessment (Terrestrial and Aquatic Ecosystems, and Species) – Wetlands and Rivers

Peer Reviewer: Duncan Hay, Catherine Pringle, and Leo Quayle, Institute of Natural Resources

EXPERT REVIEW AND SPECIALIST RESPONSES: Freshwater - EGI Expansion					Change has been effected in the report
					No change has been effected in the report (i.e. not required and supported by response by Specialist)
Expert Reviewer Name	Page Range	Line/s	Table/Figure	Expert Reviewer Comments	Responses from Specialists
Kate Pringle	5	1-30		This section has different line spacing to the rest of the report.	Corrected
Kate Pringle	5	23-29		This is a very long sentence. I suggest shortening.	For clarity, the sentence has been split into three sentences.
Kate Pringle	6	2		"the Eskom" - "the" should be removed	Corrected
Kate Pringle	6	9		Electricity grid infrastructure does not need to be written in full again as the acronym has already been provided in the previous section	This was previously abbreviated in the summary but needs to be abbreviated again in the first section of the main report.
Kate Pringle	7	19		build should be builds	Corrected
Kate Pringle	8	8		Why does the freshwater assessment identify caves, geology and roosts?	This was a generic sentence copied from CSIR template. It has been reworded to relate to freshwater features such as waterfalls, spray zones etc.
Kate Pringle	8	32		Further the above - should this not be further to the above?	Corrected
Kate Pringle	9	6		I think it would be good to mention that the species information relates to freshwater-dependent species and not all plants, butterflies and reptiles	Edited
Kate Pringle	12	10		PES should be written in full	PES was already written in full in this section
Kate Pringle	12	11		EI and ES should be written in full	Corrected
Kate Pringle	12	12		DWS should be written in full	DWS has already been abbreviated in Section 3 on Page 8.
Kate Pringle	12	30-33		It is unclear why stream order has been included in determining river sensitivity. Could you provide additional justification for this?	Higher stream order usually represents smaller, faster flowing, lower volume rivers higher in the catchment which are more sensitive to impacts.
Kate Pringle	13		Table 1	I would suggest that Ramsar sites be included in the very high sensitivity class	The reason why Ramsar sites were given a "high" sensitivity and not given a very high sensitivity is because they are protected to some extent. We feel that highly sensitive systems outside of protected areas and other conservation areas are more sensitive as they are more likely to be impacted by development.
Kate Pringle	23		Table 3	HGM should be written in full	HGM is already abbreviated in Table 2 on Page 22.

EXPERT REVIEW AND SPECIALIST RESPONSES: Freshwater - EGI Expansion					Change has been effected in the report
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Expert Reviewer Name	Page Range	Line/s	Table/Figure	Expert Reviewer Comments	Responses from Specialists
Kate Pringle	24		Table 4	The relevant acts, strategies and policies are a bit muddled in this table. I would reorder the national instruments so that NEMA appears first as the framework legislation followed by the various specific environmental management acts (SEMAs) e.g. National Water Act. I would also then list the associated instruments, policies and strategies under the relevant act e.g. the EIA regs under NEMA and the RQOs under the National Water Act.	No changes done. The table has been ordered as per CSIR suggestions and flow from international instruments/legislation down to provincial/regional legislation
Kate Pringle	29		Table 4	Is it necessary to list all the extended power ordinances?	These are not power ordinances but conservation ordinances relevant to freshwater. We just wanted to be thorough.
Kate Pringle	31	3-5		Are these not better classified as direct and indirect impacts?	Changed to 'direct' and 'indirect'
Kate Pringle	31-34			This section is very similar to Section 9. Presumably Section 5 should focus on broad impacts and section 9 specific impacts and mitigation. It might be useful to list similar key impacts (as per section 9) and provide an associated description. This would help the reader to match the broad impacts and proposed mitigation measures.	This is probably linked more to the templates that were provided, which guided our reporting process, noting that there were changes made to the reporting structure and formats, particularly in the gas report.
Kate Pringle	31	13		I would suggest listing construction of substations and powerlines first as this is the primary activity.	Changed
Kate Pringle	32	3		Threatened or other species	Corrected
Kate Pringle	32	32		which should be with	Corrected
Kate Pringle	33	14		In severe more cases?	Corrected to "In more severe cases"
Kate Pringle	36		Table 5	"Heavily infested areas is having an impact" should be "heavily infested areas are having an impact"	Corrected to "heavily infested areas have a significant impact..."
Kate Pringle	37		Table 5	NFEPA wetlands sfloodplains s , seeps...	Corrected
Kate Pringle	40		Table 7	Ramsar wetlands should be very high	The reason why Ramsar sites were given a "high" sensitivity and not given a very high sensitivity is because they are protected to some extent. We feel that highly sensitive systems outside of protected areas and other conservation areas are more sensitive as they are more likely to be impacted by development.
Kate Pringle	66	25		2017 should be in brackets	Corrected
Kate Pringle	68	3		CJ should be C.J.	Corrected

EXPERT REVIEW AND SPECIALIST RESPONSES: Freshwater - EGI Expansion					Change has been effected in the report
					No change has been effected in the report (i.e. not required and supported by response by Specialist)
Expert Reviewer Name	Page Range	Line/s	Table/Figure	Expert Reviewer Comments	Responses from Specialists
	General comment			Have birds been considered elsewhere? There are several key wetland species such as cranes which may be significantly impacted by powerlines.	Avifauna assessment will cover impacts to birds
Kate Pringle	General comment			The report largely focuses on aquatic biodiversity. Other important freshwater aspects, particularly water production by ecological infrastructure has not been considered. For example, strategic water source areas (SWSAs) have not been mentioned. Although the SWSAs likely to be impacted in the eastern corridor are relatively small they should be noted and avoided. Of greater concern are the extensive groundwater strategic water source areas in this corridor. In addition, most of the wetland resources in northern KZN are groundwater driven. Has groundwater been considered elsewhere? If not, this is a major oversight that must be addressed. If the groundwater has been addressed elsewhere, it would be helpful to cross-reference.	Note from the Project Team: The EGI is not expected to be deep enough to impact significantly on groundwater resources and deep aquifers. The specialists believe that the consideration of groundwater is not a major concern as aquatic systems are not driven significantly by groundwater resources, and the impacts from gas pipelines will be minor (and non-existent for EGI). However, this assumes that we are referring to (deeper) groundwater and not subsurface flows. Nevertheless, the following impact has been assessed in the Freshwater EGI Report: Pollution (water quality deterioration) of freshwater ecosystems and potential contamination of groundwater/subsurface drainage. Note that Strategic Water Source Areas (SWSAs) - Surface and Groundwater (Dataset: Council for Scientific and Industrial Research (CSIR), April 2018) has been used in the Environmental Sensitivity Analysis, and has been rated with a HIGH Sensitivity. This will be captured in the Environmental Sensitivity Map in the SEA Report, as well as in the Integrated Biodiversity Assessment Chapter.
Kate Pringle	General comment			Have estuaries been considered elsewhere? The Orange river mouth wetland/estuary has been noted but none of those in KZN.	Estuaries are not considered in the Freshwater Assessment but are the subject of a separate dedicated specialist assessment.

7. Integrated Biodiversity and Ecology Assessment (Terrestrial and Aquatic Ecosystems, and Species) – Avifauna

Peer Reviewer: Jonathan Booth and Robin Colyn, Birdlife South Africa

EXPERT REVIEW AND SPECIALIST RESPONSES: Avifauna - EGI Expansion						Change has been effected in the report
						No change has been effected in the report (i.e. not required and supported by response by Specialist)
Expert Reviewer Name	Page Range	Line/s	Table/Figure	Expert Reviewer Comments	Specialist Response	
R.Colyn	9 - 10	46	Study Methodology inset	Bullet point 9: aggregated habitat sensitivity score - low and medium score threshold overlap, i.e. Low = 2, Medium = 1 - 177	This is typo. It should be Low = 0. It has been rectified.	
R.Colyn	8-10	46	Study Methodology inset	Methodology is well suited for the proposed scope of works - incorporates extensive threatened species data sources and utilises fine scale spatial layers.	Noted with appreciation	
R.Colyn	10-11	7	Table 1	With reference to SABAP2 data used: "More than 36% of pentads have four or more lists." Were pentads with four or more cards submitted only used for analyses? Were full protocol and incidental records utilised? My reasoning here is that with range restricted, elusive and low density species it would be imperative to use all available data to represent them on these landscape level scales.	All pentads where data was collected were used irrespective of the number of lists. When SABAP2 data was lacking, it was supplemented with SABAP1 data.	
R.Colyn	17 - 18	40	Table 3	Barlow's Lark (NT) and Red Lark (VU) - displacement through loss of habitat?	The habitat in the Expanded Western Corridor is such that little if any vegetation clearing will be required in the power line servitudes. Displacement due to habitat transformation in the powerline servitudes should therefore not be an issue.	
R.Colyn	19-20	1	Table 3	Black-rumped Buttonquail (EN)? In addition to displacement, we have found numerous Kurrichane Buttonquail and Common Quail under transmission lines in a nature reserve within the eastern Free State. This could be suggestive of a greater vulnerability than expected.	We have added the species as suggested	
R.Colyn	20		Table 3	Remove "CR" from Southern Banded Snake Eagle species name.	Done	
R.Colyn	20		Table 3	Orange Ground (NT) and Spotted Ground Thrush (EN) along corridors between climax forest patches (i.e. listed as thicket/dense bush on Land Cover 2014) - displacement?	We have added the species as suggested	

EXPERT REVIEW AND SPECIALIST RESPONSES: Avifauna - EGI Expansion						Change has been effected in the report
						No change has been effected in the report (i.e. not required and supported by response by Specialist)
Expert Name	Reviewer	Page Range	Line/s	Table/Figure	Expert Reviewer Comments	Specialist Response
J. Booth		13	18		"Some avifaunal specialists did not respond to data requests" - has this resulted in any significant gaps in data? Would it be beneficial if the authors were allowed more time to collect possible missing data in order to increase the level of confidence in their results?	It will never be possible to include all available data from all specialist sources and it is envisaged that such information gaps will be addressed during the site specific assessments to be conducted. See second last point below.
J. Booth		13	19 - 21		BirdLife South Africa strongly supports this statement; given inherent SEA limitations, the SEA must not preclude a full EIA (and not just a Basic Assessment) taking place at the individual project level.	The level of investigation will not be determined by the legal procedure (BA or EIA) but by the habitat sensitivity level.
J. Booth		29	6	Table 5	Could the authors describe how various buffer distances were calculated / what informed the buffer distances?	Buffer distances were defined based on our professional judgment of the extent of the potential impact of the EGI on avifauna within the defined habitat classes - wetlands and waterbodies have 500 m buffer and medium to very high sensitivity depending on the biome.
J. Booth		42	4	Table 7	For Very High and High Sensitivity Class: Provincial conservation authorities and any regional conservation NGO's (e.g. Wilderness Foundation and Nature's Valley Trust in the Eastern Cape; Wildlands Conservation Trust in KwaZulu-Natal) should also be notified of any development proposals.	This was added as recommended.
J. Booth		43		Table 7	Under Permit Requirements (if any) column, in some instances the following is required: "If the development overlaps with an IBA, BLSA and the EWT should be notified of any development proposals." This should include Key Biodiversity Areas (KBAs), as it is likely that in the coming years and possibly before final pipeline planning commences, IBAs will transition to KBAs.	This was added as recommended.

8. Visual Assessment

Peer Reviewer: Scott Mason, SRK Consulting (South Africa) (Pty) Ltd

EXPERT REVIEW AND SPECIALIST RESPONSES: Visual - EGI Expansion					Change has been effected in the report
					No change has been effected in the report (i.e. not required and supported by response by Specialist)
Expert Reviewer Name	Page Range	Line/s	Table/ Figure	Expert Reviewer Comments	Specialist Response
Scott Masson	2	4		Visual Impact Assessment	Amended.
Scott Masson	3	14		The visual assessment should also be dependent on the type of infrastructure. For example, in some instances, a mono-pole has a very different visual impact compared to a lattice structure. This is especially the case when there is a mountainous (grey) backdrop to the lattice structure.	The issue of pylon types is not the focus of an SEA conducted at a regional scale, where the emphasis is on identifying optimal routing of powerlines. Pylon types can be visually important, but are normally dealt with in an EIA of a particular project. The wording in the report is being updated to make the distinction more clear.
Scott Masson	3	16		Does the worst case scenario assume mono-pole or lattice structure or are mono-pole structures not possible for the largest kV transmission lines? I note the comment on pg 10 and that the pylon type can have fairly important implications at the local landscape or townscape scale.	See response above. Correct, the pylon type has important implications at the local project or townscape scale.
Scott Masson	3	21		Emphasis is on geomorphology, but I would argue that land use is equally important in informing visual sensitivity. This is an initial comment without having reviewed the methodology.	In the experience of the visual specialists, landforms play a more significant role at the regional scale of the study. Land use and vegetation cover tend to only have visual significance at the local scale.
Scott Masson	4	10		Eastern Corridor	Amended.
Scott Masson	4	15		In the comment for the expanded Western Corridor, is the identification of the Medium and High sensitivity areas a function of distance from the proposed EGI only?	Both 'distance' and the nature of the feature or receptor are taken into account in the visual sensitivity mapping.
Scott Masson	4	15		"Very high visual sensitivity areas are those visual resources (?) and sensitive (?) receptors..."	Wording added to provide clarification.
Scott Masson	6	29 -32		I would think it would be very difficult to determine the sense of place for a project of this scale. Is the author not referring to "Visual Character" or "Visual Quality" as these aspects are determined by the regional characteristics of a place? The sense of place is determined by how a person / community identifies to those characteristics / qualities. And for this project, there will be many different types of communities to consider.	The concept of 'Sense of place' is merely being described here, and could apply at a range of scales, e.g. the Cape Winelands. 'Genius Loci' by C. Norberg-Schulz is a classic reference.

EXPERT REVIEW AND SPECIALIST RESPONSES: Visual - EGI Expansion					Change has been effected in the report
					No change has been effected in the report (i.e. not required and supported by response by Specialist)
Expert Reviewer Name	Page Range	Line/s	Table/ Figure	Expert Reviewer Comments	Specialist Response
Scott Masson	7	18		Step 2?	Corrected. It is supposed to be 'Section 6'.
Scott Masson	7	18-20		What about land use? It has been mentioned earlier in the report that visual sensitivity will be very different if the corridor is across a mining area compared to a pristine area.	As mentioned above, land use only becomes significant at the local scale. The SEA is a regional-scale desktop study based on available information and shape files. Urban areas and protected environments have however been included.
Scott Masson	8	32		Heading to next page	Final draft will be formatted by CSIR.
Scott Masson	9	5		For NEM:ICMA: I would remove reference to 1 km because it would depend on if the coastal zone is in urban or non-urban areas and also if coastal setback lines have been determined.	It makes sense to use the 1 km at the regional scale, as per the legislation, as the mapping does not deal with any urban areas, nor with local area mapping determination.
Scott Masson	9	5		NEM:PAA: This "provincial" instrument has already been discussed as a "national" instrument. Also check PAA acronym for first time use.	Wording has been amended.
Scott Masson	10	2		"The potential footprint and visual implications of the proposed powerline grid have been..."	Amended.
Scott Masson	10	8-11		From field observations, in my opinion, a monopole structure can be significantly more (visually) intrusive than a lattice structure, but I acknowledge that it would be difficult to consider at the scale of this study.	A range of pylon types are available for different uses and local conditions. These were not considered for a regional-scale SEA.
Scott Masson	10	12 -13		Depends on vegetation type and I think pylon structure could have equal value, for certain landscapes, in determining the visual sensitivity.	Typical footprints are merely indicated here, but do not have a meaningful bearing on the sensitivity mapping at the regional scale.
Scott Masson	10	19		Is 70 ha correct? 700 000 m ² ?	These figures were provided to the specialists. On checking, the large substation at e.g. De Aar is nearly 70 ha.
Scott Masson	16 / 18		5c / 6c	West - east transect would be also useful to show the elevation change from the coast inland.	This would be of academic value as the national powerlines would generally run the length of the corridor.
Scott Masson	16 / 18		5c / 6c	Can you include photographs of the types of landscape features? If the reader hasn't been to these areas before or does not have a good handle of geology, then the reader will not be able to picture the different types of geomorphological areas or landscape features.	Agreed. The a few photos have been included. The specialists are a bit limited by the fact that the SEA is a desktop study with no fieldwork.
Scott Masson	19		7.1	Game reserves / resorts	Amended.
Scott Masson	20		7.2	Refer to previous comment about coastal zone. The mapped 1 km then already has an inherent buffer zone.	Refer to previous response. The 1 km is being used by CSIR and SANBI.
Scott Masson	21		7.3	For topographic features, cultural landscapes and heritage sites, there should be some form of buffer for "Very high sensitivity" because, for example, a pylon within 250 m of a heritage site would have a significant	Agreed. 250m has been added for those features. However, it should be noted that these are regional mapping buffers. Actual setbacks need to be determined based on local

EXPERT REVIEW AND SPECIALIST RESPONSES: Visual - EGI Expansion						Change has been effected in the report
						No change has been effected in the report (i.e. not required and supported by response by Specialist)
Expert Reviewer Name	Page Range	Line/s	Table/ Figure	Expert Reviewer Comments	Specialist Response	
				impact on that feature similar to a provincial route.	conditions.	
Scott Masson	24 / 27		7c / 8c	It is unclear why transmission lines have been included in this figure. I agree that the lines should be considered as aligning the proposed transmission lines along / near existing lines may increase compatibility and landscape integrity (although cumulative impact becomes a problem) but the transmission lines are not features.	Figures 7c and 8c are information maps and not related to sensitivity. The existing transmission lines are merely included as useful information.	
Scott Masson	33	11		May have to reword because in mitigation table, it states that powerlines should not run along river valleys. Perhaps lines should not run along narrow valleys?	Wording in mitigation table amended.	
Scott Masson	33	16-18		A simplified map showing degraded areas (e.g. industrial / mining areas) may also be useful rather than a land use map. Existing transmission lines could be shown on this map.	Agreed that this information would be useful, but is far too detailed and not available as shape files. The SEA does also not involve any field work.	
Scott Masson	33	22 - 24				
Scott Masson	34	8-10		In my opinion, the monopole is more visually intrusive than lattice structures.	See previous responses above. Those considerations were not part of the regional mapping study.	
Scott Masson	36	7-8		Perhaps then the alignment should be on landscape unit 2 or 3 but close to the interface with landscape unit 1 so that a backdrop is provided on at least on side? This obviously depends on proximity to other sensitive features and receptors.	Agreed. This accounted for in the Guidelines of Section 10.1.	
Scott Masson	37	1-3		The plantations and sugar cane fields could be presented on a "land use" map as mentioned in the comment on page 33.	As in the case of industrial/mining areas, sugar cane fields would be too detailed to map at the regional scale without shape files.	

9. Seismicity Assessment

Peer Reviewer: Dr Alistair Sloan; University of Cape Town

EXPERT REVIEW AND SPECIALIST RESPONSES: Seismicity – EGI Expansion					Change has been effected in the report
					No change has been effected in the report (i.e. not required and supported by response by Specialist)
Expert Reviewer Name	Page Range	Line/s	Table/Figure	Expert Reviewer Comments	Responses from the Specialist
A Sloan	2	all		Good summary of major points. Neither overplays nor underplays the hazard, acknowledges uncertainty, and emphasises the importance of considering local site conditions and secondary hazards. This report is very similar in scope to the one I previously reviewed and I see most of my comments were addressed. I therefore have few additional substantive remarks here.	Noted
A Sloan	8	n/a	1	I believe Midzi et al. 2018a is now accepted/online with a publication date of 2019.	Yes, the paper has been published with "Manzunzu" as the first author. The full reference has been inserted in the reference list i.e. Manzunzu, B, Midzi, V, Mulabisana, TF, Zulu, B, Pule, T, Myendeki, S and Rathod, GW. 2019. Seismotectonics of South Africa. Journal of African Earth Sciences, 149:271-279. Therefore Midzi et al 2018a has been amended to Manzunzu et al 2019; and Midzi et al 2018b has been amended to Midzi et al 2018 in the main report. In addition, Midzi et al 2018b has been amended to Manzunzu et al 2019; and Midzi et al 2018c has been amended to Midzi et al 2018b in Appendix A.
A Sloan	13	49-50		Perhaps better to actually quote and cite Bath's Law (difference in M of 1.2). Bath, 1965 Lateral inhomogeneities of the upper mantle, Tectonophysics could be used as a citation.	Noted. This has been included in the section and cited in the reference list for the EGI and Gas Seismicity Reports.
A Sloan	14	1-3		Perhaps could be phrased better. Moderate dynamic loading may occur throughout South Africa however while large dynamic loading is possible, the probability of it occurring is estimated to be very low within decadal timescales.	Noted. This has been re-phrased in both the EGI and Gas Seismicity Reports.
A Sloan	16	27-28		There is significant landslide susceptibility in the eastern area as acknowledged later in the document.	Noted. This has been re-phrased.

EXPERT REVIEW AND SPECIALIST RESPONSES: Seismicity – EGI Expansion					Change has been effected in the report
					No change has been effected in the report (i.e. not required and supported by response by Specialist)
Expert Reviewer Name	Page Range	Line/s	Table/Figure	Expert Reviewer Comments	Responses from the Specialist
A Sloan	20		4	As in the previous document there are active faults mapped in both areas (Appendix B, Fig. 1). Are these not documented here because that data source is considered unreliable, or because a different criteria of 'active fault is used'?	Descriptions have been included in Table 4. In addition, additional information has been added in Appendix B, and Figure 1 in Appendix B has been replaced with a map that cites fault names.
A Sloan	22	12-13		Typo? Would this not be better as “has occasionally caused alarm”?	Noted, this has been corrected in the report
A Sloan	23	40		Typo: evidence of earthquakes.	Noted, this has been corrected in the report