

APPENDIX D – PLAN OF STUDY FOR EIA



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External Reference	SEC Reference	018021	Date	18.09.2019
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Department of Environmental Affairs and Development Planning
1 Dorp street
Cape Town
8000

Attention: To whom it may concern

THE PROPOSED CLEARANCE OF VEGETATION FOR A PROPOSED HOUSING DEVELOPMENT AND ASSOCIATED INFRASTRUCTURE ON ERF 1901, BLUE DOWNS, WESTERN CAPE

SEC PROJECT NUMBER: 018021

Introduction

SEC was appointed by City of Cape Town to undertake the EIA Application relating to this human settlement development in February 2018. As part of the initial screening of the site, the area of vegetation to be removed for the development was calculated to be under 20hectares in total. Given that the NEMA EIA trigger for the removal of vegetation under 20hectares is listed within Listing Notice 1 and Listing Notice 3 of the NEMA EIA Regulations, a Basic Assessment Application was commissioned.

The botanist Paul Emms, on behalf of Bergwind, identified various areas on site containing indigenous vegetation varying from intact to semi-degraded to severely degraded. Emms demarcated a 40-meter buffer area along the edge of this dune ridge and dune slack area that need to be conserved as a no-go area.

The pre-application BAR went out for public participation (PP) during November 2018 and included this 40-meter buffer area as mitigation for vegetation loss.

A site meeting was held with City of Cape Town: Biodiversity Management Branch on 19 July 2018 to discuss the viability of the 40-meter buffer area as mitigation for vegetation loss.

A meeting was also held with DEA&DP on 21 August 2018 to discuss suitable options for mitigation of vegetation loss for the development.

The comments received during this first round of PP from various authorities including Cape Nature, City of Cape Town Environmental Resource Management as well as DEA&DP, indicated there are various uncertainties relating to the future planning of the servitude, the viability of the long-term maintenance and upkeep of such a buffer area as well possible isolation of this patch of vegetation in future.

Considering these comments, it was concluded that an offset should be identified that would result in the formal protection of an appropriate portion of vegetation and 'gain' for the conservation estate, and that the 40m buffer on the site would no longer be required.

Upon finalizing the Final BAR for PP and upon having a closer look at the vegetation removal figures that were provided by both the botanist and offset specialists, SEC noted that the new

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site boundary (as provided by the land surveyor, which excludes the initially proposed 40m buffer) implicates that the total area of indigenous vegetation to be removed is just over 20hectares.

Various discussion the ensued relating to the above. Upon further consultation with the NEMA EIA Regulations 2014 as well as consultation with the Department of Environmental Affairs & Development Planning (DEA&DP), the applicant and the town planner, it has been ascertained that Scoping/EIA Application in terms of the Listing Notice 2 of the NEMA EIA Regulations 2014 must be followed and submitted to the DEA&DP for their final decision.

The previous BA application was therefore ceased, and a new Scoping/EIA application was commenced with.

Project description

The proposed residential development will be located on the remainder of Erf 1901, Blue Downs. Measuring approximately 78.9ha in extent. The site generally referred to as Blueberry Hill, is located within Blue Downs, north of the N2 and east of the R300, between Eersteriver and Blue Downs Way and directly north of Forrest Drive.

The property is largely undeveloped with the exception of a section of housing on Erf 358 and a few housing units on Stemberry Road.

The City of Cape Town proposes a human settlement development which allows for a variety of housing opportunities including FLISP (Finance Linked Individual Subsidy Programme), BNG (Breaking New Ground) and Incremental Housing (site and service).

The main emphasis will be on providing BNG opportunities with smaller components of FLISP and incremental housing. The development can be characterised as a medium-density residential development and an estimated 4150 residential opportunities can be created on the property. Other land uses over and above the residential erven will be community facilities, public open spaces and commercial, retail and service industries to provide future employment opportunities.

Legal Framework

Upon consultation with the NEMA EIA Regulations, 2014 (as amended) as well as consultation with the DEA&DP, it has been ascertained that Scoping/EIA Application in terms of the Listing Notice 2 of the NEMA EIA Regulations 2017 must be followed and submitted to the DEA&DP for their final decision.

Legislative Requirements

The Scoping/EIA process to be followed is defined by the EIA Regulations contained in Government Notice No. R.326. These Regulations are published in terms of the National Environmental Management Act, Act No. 107 of 1998, as amended.

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One of the requirements of the EIA Regulations (please refer to Appendix 2 (1) (h) of the NEMA EIA Regulations, 2014 (as amended) is that a Plan of Study for Environmental Impact Assessment must be submitted to the Competent Authority along with the Final Scoping Report. The Competent Authority will then review the Plan of Study and decide whether the tasks, approach and methodology proposed for the EIA phase will be able to provide an effective assessment of the impacts identified as potentially significant during the Scoping phase.

In accordance with the EIA Regulations, this Plan of Study provides a description of the tasks to be undertaken during the EIA phase, including any specialist input, and how these tasks will be undertaken; the stages at which the Competent Authority will be consulted; the proposed assessment methodology to be used; particulars of the EIA phase public participation process; and any specific information requested by the Competent Authority,

These are now discussed further.

i A description of alternatives to be considered and assessed within the preferred site, including the option of not proceeding with the activity

The NEMA EIA Regulations, 2014 (as amended) require that a “*description of any feasible and reasonable alternatives identified*” must be provided.

‘Alternatives’ is defined by NEMA as the following:

“*Alternatives*” in relation to a proposed activity, means different means of meeting the general purpose and requirements of the activity, which may include alternatives to:

- a) The *property* on which or location where it is proposed to undertake the activity;
- b) The *type* of activity to be undertaken;
- c) The *design* or *layout* of the activity;
- d) The *technology* be used in the activity;
- e) The *operational* aspects of the activity; and
- f) The option of not implementing the activity.

Point (f) above requires that the “no-go” alternative must also be assessed.

The Environmental Assessment Practitioner, in conjunction with specialist input, has identified the following alternatives for the proposed development that will be assessed in detail in the EIA phase:

LAYOUT/DESIGN ALTERNATIVES

ALTERNATIVE 1: First draft concept block layout (no sensitive area)

This alternative was the initial concept block layout plan proposing development for the entire subject property, not including any sensitive area. As this plan was conceptual the areas and numbers are only estimated.

The development is proposed to be a mix between subsidy housing and FLISP housing units. However, the FLISP housing will only make up a small percentage of the development, approximately 5% as required by the City of Cape Town Housing Department. The subsidy housing is proposed to consist of a mix of single and double storey semi-detached, 3 and 4 row housing and the FLISP units is proposed to be single storey freestanding units.

In terms of residential distribution, it is proposed that the FLISP units be located to the north and eastern parts of the site, closer to Blue Downs way to serve as a buffer between the middle to higher income established residential areas. The remainder of the site will be subsidised housing.

The residential yield of this layout is proposed to be approximately 3 533 units which gives a gross density of 49 units per hectare.

ALTERNATIVE 2: Second draft concept block layout (including the no-go sensitive area)

This alternative was the initial concept block layout plan proposing development for the entire subject property excluding the entire no-go sensitive area of approximately 10,7ha on the western boundary as indicated by the Botanist. As this plan was conceptual the areas and numbers are only estimated.

The development is proposed to be a mix between subsidy housing and FLISP housing units. However, the FLISP housing will only make up a small percentage of the development, approximately 5% as required by the City of Cape Town Housing Department. The subsidy housing is proposed to consist of a mix of single and double storey semi-detached, 3 and 4 row housing and the FLISP units is proposed to be single storey freestanding units.

In terms of residential distribution, it is proposed that the FLISP units be located to the north and eastern parts of the site, closer to Blue Downs way to serve as a buffer between the middle to higher income established residential areas. The remainder of the site will be subsidised housing.

The residential yield of this layout is proposed to be approximately 3 079 units which gives a gross density of 42 units per hectare.

ALTERNATIVE 3: First draft detail subdivision layout (no sensitive area)

This was the first detail subdivision layout plan which was done on the full potential of the site, thus also including the sensitive no-go area in the developable area of the subject property.



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The total residential yield for this layout is 4 272 units, of which 4 046 is subsidy units and 239 partially subsidized FLISP erven in the FLISP housing market. This amounts to a gross density of 51,4 units per hectare.

ALTERNATIVE 4

This was the second detail subdivision layout plan which was done and accommodates a 40m sensitive no-go buffer area on the western boundary of the site as proposed by the Botanist. The sensitive no-go area is 2,68ha in size.

The total residential yield for this layout is 3 932 units, of which 3 706 is subsidy units and 226 is FLISP units. This amounts to a gross density of 49, 8 units per hectare.

ALTERNATIVE 5 (Current proposed Preferred Alternative): Excluding the 40 m buffer area and including a proposed offset area

This is the third detail subdivision layout plan. After further environmental processes and specialist studies were done, it was recommended that an offset be identified for the sensitive area and that the 40m no-go buffer area on the western boundary of the site are no longer required. The layout was thus revised to include the 2,59ha area previously excluded, thus the entire subject property area is now available for urban development.

The total residential yield for this layout is 4 150 units, of which 3 849 (93%) is subsidy units and 301 (7%) is partially subsidized FLISP erven in the GAP housing market. This amounts to a gross density of 52.6 units per hectare.

No-Go Alternative

The no-go option entails the maintaining of the status quo of the site. In this case, the no-go option would mean that the development will not take place and that there will consequently be no clearance of vegetation for the sake of development.

The site will remain as is, undeveloped.

ii A description of the aspects to be assessed as part of the environmental impact assessment process;

The following aspects will be assessed as part of the EIA phase:

iii Aspects to be assessed by specialists

- The botanical aspects will be assessed by Paul Emms
- The freshwater impacts, more specifically the possible impacts on wetlands, will be assessed by Dean Ollis

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- The social impacts will be assessed by SEC in consultation with the social facilitators on the project team, Umtha.
- Traffic Impacts will be assessed by the traffic engineers Sturgeon SA
- Stormwater impacts will be assessed by Nadeson Consulting Services
- Impacts on service availability will be assessed by Nadeson Consulting Services

iv A description of the proposed method of assessing the environmental aspects, including aspects to be assessed by the specialists

Impacts are changes in an environmental parameter that result from undertaking an activity. Identified impacts will be assessed in relation to the existing receiving environment. Consideration will be given to direct and indirect impacts as well as cumulative impacts associated with the development.

The following impacts will be assessed during the EIA Phase:

- The botanical impact of this permanent loss of endangered vegetation.
- The impacts of the development, if any, on the wetlands present within the dune slack area just outside of the property, will be assessed by Ollis during the EIA phase.
- Social impacts associated with the development will be assessed in detail in the EIA Phase these include:
 - o Any nuisance impacts such as dust, noise and traffic on the public during construction phase
 - o Any nuisance impacts such as noise and traffic on the public during the operational phase
 - o The positive socio-economic impact the development will have on the community in the form of housing provision, job creation and the provision of community services such as schools, medical services etc.
- Traffic impacts associated with the development relating to the access to the development, internal roads, parking, additional traffic generated etc.
- Stormwater impacts associated with the development

Phase 1 will include identification of environmental impacts, and Phase 2 the assessment of environmental impacts. Phase 3 will involve the identification of mitigation measures to avoid, minimise or offset environmental impacts.

Phase 1: Impact Identification

The potential environmental impacts of the proposed activity have been identified during the scoping phase. These impacts have been identified based on the following:

- Inspection of the site and surroundings (current environmental conditions).
- Discussions with members of the project team (SEC, applicant, professional team and input from specialists).



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- Discussions with relevant authorities (Western Cape DEA&DP and other relevant state departments).
- Review of spatial information including maps and design parameter alternatives.
- Issues and concerns that are raised during the public participation process.
- Determining any changes to the receiving environment as a result of the proposed development.

Phase 2: Impact prediction and assessment

The objective of assessing the impacts is to determine whether the activity and any alternatives identified as reasonable or feasible for meeting the purposes of the application, are environmentally sustainable (i.e. any trade-offs between biophysical, social and economic environmental impacts are acceptable; and any environmental impacts do not threaten the ability of the biophysical receiving environment to regenerate and thus function sustainably).

The assessment of impacts will include (amongst others):

- Identifying and assessing the potential impacts associated with the activity and its alternatives
- Predicting the nature, magnitude, extent and duration of potentially significant impacts.
- Identifying the timing of the impact that is, during construction, operation and/or decommissioning
- The extent to which the impact can be reversed or not
- The extent to which the impact can be mitigated (avoided; minimised; or offset)
- The likelihood or probability of the impact actually occurring; and
- The significance of the impact.

The methods used to predict, assess and rank the characteristics of impacts will include the following:

- Professional judgement.
- Case studies and/or past experience.
- Specialist studies.
- I&APs comments and concerns.

Phase 3: Mitigation

A number of mitigation measures will be provided for each of the impacts identified. Mitigation measures proposed by any specialists will be taken into consideration in order to avoid, minimise or offset potential negative impacts, as well as maximise potential positive impacts.

Phase 4: Reporting

An Environmental Impact Assessment Report and Environmental Management Plan (EMP) will be prepared in terms of *Appendix 4 of GN No. R.982, EIA Regulations, 2014 (as amended)*. The ensuing Draft EIA Report and EMP will be submitted to registered I&APs for comment (see *point iv* below).

v A description of the proposed method of assessing duration and significance Evaluating Identified Impacts

The following table will be utilised in the assessment of identified impacts. The assessment criteria and rating categories are derived from the DEA's *Guideline Document: EIA Regulations: Implementation of Sections 21 22 And 26 of the Environment Conservation Act, April 1998*.

Table 1: Impact Evaluation Table

Item	Definition
Extent	
Local	Extending only as far as the boundaries of the activity, limited to the site and its immediate surroundings
Regional	Impact on the broader region
National	Will have an impact on a national scale or across international borders
Duration	
Short-term	0-5 years
Medium term	5-15 years
Long -Term	>15 years, where the impact will cease after the operational life of the activity
Permanent	Where mitigation, either by natural process or human intervention, will not occur in such a way or in such a time span that the impact can be considered transient.
Magnitude/Intensity	
Low	Where the impact affects the environment in such a way that natural, cultural and social functions and processes are not affected.
Medium	Where the affected environment is altered but natural, cultural or social functions and processes continue, albeit in a modified way.
High	Where natural, cultural or social functions or processes are altered to the extent that they will temporarily or permanently cease.
Probability	
Improbable	Where the possibility of the impact materialising is very low, either because of design or historic experience



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Probable	Where there is a distinct possibility that the impact will occur
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Significance	
Low	Where a potential impact will not have an influence on the project and will not require special design considerations for the project
Medium	Where a potential impact could influence the project and will require modification or mitigation measures to be included in the design
High	Where the environmental impacts are so high that it could result in the project being environmentally unacceptable, even with mitigation
Status of Impact	
Whether the impact is positive (a benefit), negative (a cost) or neutral	
Degree of Confidence in Predictions	
The degree of confidence in the predictions is based on the availability of information and specialist knowledge	
Mitigation	
Mechanisms used to minimise or eliminate negative impacts on the environment and to enhance project benefits	
Highly Probable	Where it is most likely that the impact will occur
Definite	Where the impact will undoubtedly occur, regardless of any prevention measures

Ranking of Identified Impacts

The following table will be used in order to allow for ranking of the identified impacts, a scoring system has been used which creates values for each of the impact parameters. These will be totalled and the impact with the highest total will be ranked the most significant. This is detailed in the table below.

Table 2: Impact Ranking Table

Impact Parameter – Consider with and without mitigation (two values per impact)				
Extent	Rating	With Mitigation	Without Mitigation	Comments
Local	1			
Regional	2			
National	3			
Duration	Rating			
Short term	1			
Medium Term	2			
Long Term	3			
Permanent	4			
Magnitude/Intensity	Rating			
Low	1			
Medium	2			



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High	3			
Probability	Rating			
Improbable	1			
Probable	2			
Highly Probable	3			
Definite	4			
Significance	Rating			
Low	1			
Medium	2			
High	3			
Stakeholder Concern	Rating			
Value multiplied by number of times issue raised by I&AP's	4			
Specialist Impact Identified	Rating			
	1			
Total Value				

vi An indication of stages at which the competent authority will be consulted

Communication with the DEA&DP will be conducted at the following stages:

- Submission of an Application Form for Environmental Authorisation
- Submission of the Draft Scoping Report prior to distribution to registered I&APs for review
- Submission of the Final Scoping Report and Plan of Study for EIA for acceptance.
- Submission of the Draft EIA Report prior to distribution to registered I&APs for review
- Submission of the Final EIA Report for decision-making purposes.

Please note that on-going communication will be maintained with the DEA&DP in order to ensure that regulatory and/or procedural requirements are being met in the EIA process.

vii Particulars of the public participation process that will be conducted during the environmental impact assessment process

(a) Submission of Draft EIA Report to registered I&APs

In accordance with Chapter 6 of the NEMA EIA Regulations, 2014 (as amended) all registered I&APs will be provided the opportunity to comment on the Draft EIA Report and EMP. All



documentation will be available on our website (www.environmentalconsultants.co.za) and a hardcopy at the Athlone Public Library for review.

(b) Public meetings/focus group meetings

SEC does not anticipate the need for public meetings/focus group meetings. However, these will be conducted depending on the level of public sensitivity (during the Draft EIA phase). It is anticipated that if required, meetings will be held with small, focused groups in order to resolve and address issues and objections efficiently.

(c) Consultation with key stakeholders (authorities)

A copy of the Draft EIA Report and supporting documentation will be made available to the following authorities for comment (either in hardcopy or compact disk, depending on the preferred choice of authorities):

- The City of Cape Town.
- The Department of Water Affairs.
- DEA&DP: Land Management
- Cape Nature
- SANRAL
- The Western Cape Department of Education
- The Western Cape Department of Health
- The Western Cape Department of Transport and Public Works
- The Western Cape Department of Environmental Affairs and Development Planning: Pollution and Chemicals Management

All commenting authorities will be provided with a **30-day comment period** in which to comment on the proposed activity. Comments received from these authorities will be submitted to the DEA&DP.

(d) Submission of Final EIA Report to registered I&APs

A copy of the Final EIA Report, including a Comments and Responses Report, will similarly be distributed to registered I&APs for review prior to final submission to the DEA&DP.

The Comments and Responses Report will provide a summary of the key issues and areas of concern raised during public participation on the Draft EIA Report, as well as contain copies of all comments received from registered I&APs to date. The Final EIA Report and EMP will also contain additions or amendments where necessary based on I&AP feedback on the reports.

The final public participation period will be a **30-day comment period**.

viii A description of the tasks that will be undertaken as part of the environmental impact assessment process

(a) Review of existing information

This will involve a desktop review of existing data and information (such as aerial maps; site plans; process engineering information). This phase will include a situational (evaluation of current information) and a needs analysis (evaluation of information which may be required). SEC has visited the site a few times before to conduct the pre-feasibility assessment. This has enabled SEC to (1) gain a better understanding of the probable impacts and aspects of the activities on site and, (2) determine any likely development opportunities and constraints associated with the site.

This will be used as a benchmark to assess the activities at the site. Please note that this has been done as part of the Scoping Report, which focused on issues and impacts explicitly related to the site.

(b) Specialist study

Based on the initial assessment of the development and a history of the site; the experience of the project team (SEC, project manager and input from specialists) as well as various meetings held with the provincial Department of Environmental Affairs and Development Planning, the following specialist input will be utilised to inform the EIA phase of the application:

A Botanical Impact Assessment:

The findings of the pre-feasibility study show that the study area supports about 40 ha of mostly degraded but ENDANGERED Cape Flats Dune Strandveld, with a small portion of semi-intact vegetation and even smaller portion of intact vegetation.

The potential impacts associated with the development, as set out in the full Botanical Impact Assessment that was compiled by Paul Emms as part of the initial BA Application, will be reported on in the EIA process.

A Freshwater Assessment:

The June 2018 freshwater site scan by the Freshwater Consulting Group (FCG) concluded that the areas mapped as wetlands on the site by the City of Cape Town's Wetlands Map are NOT wetlands and that the areas we identified (in blue) as potential wetlands are not naturally occurring wetlands.

A possible dune slack wetland area was observed along a short section of the north-western boundary of the site, extending from the servitude on the outside of that boundary.

As part of the EIA process the DWS will be consulted to determine whether any further applications are required in terms of the National Water Act.

A Traffic Impact Assessment

A full Transport Impact Assessment (TIA) based on the detailed site development plan (SDP of May 2019) was prepared by Sturgeon Consulting as part of the Basic Assessment phase of the previous BA process. The TIA assesses the impact of the future development on the surrounding road network. This assessment will be included in the EIA phase of this current Scoping/EIA process.

ix Identify suitable measures to avoid, reverse, mitigate or manage identified impacts and to determine the extent of the residual risks that need to be managed and monitored

Botanical Impacts – As part of the EIA phase, the various mitigation measures that was set out in the Botanical Impact Assessment that formed part of the initial BA application will be packed out. These include the following mitigation options considered:

- The initial proposal to set out a “no-go” area of approximately 10.5ha within the site where no development should take place in order to conserve the relatively intact portion of vegetation that is present in this area. The residual risks associated with this mitigation proposal is that the on-going, long-term maintenance of this “no-go” is most likely not going to be sustainable considering the limited budget City of Cape Town will have to secure and maintain this area. The residual risk will then be the further degradation of this “no-go” area should it not be maintained and secured properly.
- The 40-meter buffer area along the northern portion of the site that was proposed as part of the initial preferred alternative that was included in the pre-application BAR that was circulated for PPP during the initial BA application. The residual risk associated with this mitigation proposal is similar than the “no-go” option mentioned above in that it is unlikely that this portion of land will be secured and maintained properly in the long-term. Also, it this small portion of vegetation is quite isolated and will therefore not be contributing to ecosystem connectivity.
- The identification and formalisation of an offset area that was considered as part of the initial BA application.

The residual risk associated with this development, despite the successful implementation of an offset, would be the further decrease in ecosystem connectivity within the Blue Downs area because of the loss of a section of relatively intact terrestrial ecosystem present on the site. Most of the surrounding area and terrestrial ecosystems within this broader area is however already severely fragmented and altered due to formal and informal housing and other developments.

Freshwater impacts – The development might have impacts on the dune slack wetlands outside of the northern border of the site, it is however unlikely. A risk matrix will be completed by the freshwater specialist during the EIA phase and submitted to the DWS for input and comment. The residual risk on wetlands are low to non-existent as the stormwater mitigation



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measures that will be implemented as part of the development is believed to be sufficient mitigation.

Traffic impacts – A full Transport Impact Assessment (TIA) based on the detailed site development plan (SDP of May 2019) was prepared by Sturgeon Consulting as part of the Basic Assessment phase of the previous BA process. The TIA assesses the impact of the future development on the surrounding road network. This assessment will be included in the EIA phase of this current Scoping/EIA process.

The residual traffic risk associated with this development, despite the implementation of a range of traffic mitigation measures that will be discussed in detail in the EIA phase, will be an overall increase in traffic generation within this area. The TIA however concludes that the traffic impacts can be mitigated to an acceptable level.

CONCLUSION

We trust that this information is sufficient for your requirements. Please contact the writer should you require any additional information.

Yours faithfully,

A handwritten signature in blue ink, appearing to read "Chantel Muller".

CHANTEL MULLER
SILLITO ENVIRONMENTAL CONSULTING

REFERENCES

- The National Environmental Management Act, 1998 (Act 107 of 1998) as amended.
- NEMA Regulations, in terms of Chapter 5 of NEMA, Government Notice R 326 (2017)
- DEA Integrated Environmental Management Guideline Series
- The National Environmental Management: Biodiversity Act, 2004 (Act 10 of 2004) as amended.
- The National Heritage Resources Act, 1999 (Act 25 of 1999) as amended.
- The National Water Act, 1998 (Act No. 36 of 1998) as amended.
- DEA&DP EIA Guideline and Information Document Series: Guideline on Alternatives (2011)

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- DEA&DP EIA Guideline and Information Document Series: Guideline on Exemption Applications (2011)
- DEA&DP EIA Guideline and Information Document Series: Guideline on Need and Desirability (2011)
- DEA&DP EIA Guideline and Information Document Series: Guideline on Public Participation (2011)

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