

## DEA&DP GUIDELINES FOR INVOLVING SPECIALISTS IN EIA PROCESSES

### ISSUES-RESPONSE TRAIL – 19 APRIL 2005

The Provincial Government of the Western Cape, Department of Environmental Affairs and Development Planning has commissioned CSIR Environmentek to coordinate the development of a series of guidelines to improve the efficiency, effectiveness and quality of specialist involvement in EIA processes.

The following issues were raised by stakeholders during the course of the scoping process for the development of these guidelines. Issues relate to the involvement of specialist in EIA processes in general, as well as to particular fields of specialist involvement for which guidelines are being drafted (i.e.biodiversity, hydrogeology, heritage, visual and aesthetic and economics). They have been taken into account in the drafting of the following guidelines:

- Guideline for determining the scope of specialist involvement in EIA processes
- Guideline for the review of specialist input into the EIA process
- Guideline for involving biodiversity specialists in EIA processes
- Guideline for involving hydrogeologists in EIA processes
- Guideline for involving visual and aesthetic specialists in EIA processes
- Guideline for involving heritage specialists in EIA processes
- Guideline for involving economists in EIA processes

The guidelines and further information about this project is available on the following websites:

DEA&DP: <http://www.capegateway.gov.za/eadp>

CSIR: <http://www.csir.co.za/iem/guidelines>

No.	Issue or comment	Raised by	Response
<b>General comments on guideline process</b>			
1	Are guidelines for EIA only or do they apply to other environmental assessment and planning processes as well (e.g. Strategic Environmental Assessment, Integrated Environmental Management)	Focus group workshops Cape Town scoping workshop	Although elements of the guidelines may be of relevance and application to other planning and environmental assessment processes, the guidelines have been developed specifically for project level EIA.
2	Do the guidelines apply only to EIAs for which applications for environmental authorization have been submitted, or do they apply to the EIA process in general.	Focus group workshops	The guidelines apply to the general process for identifying and assessing the potential environmental impacts associated with projects, regardless of whether this is undertaken as part of a pre-application planning/screening process by the project proponent during the early phases of project

			planning and design, or part of an EIA required for statutory approval of the proposed development.
3	Guidelines should clarify that they follow the logical EIA process, rather than getting caught up in the legal terminology of screening, scoping and EIA.	Cape Town scoping workshop	Agreed. The guidelines aim to reflect generic best practice.
4	Separate guidelines are needed for specialist involvement during screening, as opposed to full EIA.	Cape Town scoping workshop	The guidelines will clarify the role of specialist involvement at different stages of the EIA process, i.e. during pre-application planning, screening scoping and impact assessment.
5	How do these guidelines related to the new EIA regulations and the Law Reform process underway in the Western Cape to align heritage, planning and environmental legislation?	Focus group workshops George scoping workshop	The guidelines reflect the principles of the National Environmental Management Act (Act 107 of 1998, as amended), but do not describe specific legal or administrative requirements in order not to lose their relevance in the context of changing legislation. As such, they support the implementation of legislation and should be read in conjunction with relevant legislation.
6	Guidelines must not be drafted in a legal vacuum i.e. they should not contradict what will be in the regulations. Link to principles of existing legislation e.g. NEMA, Biodiversity Act, Heritage Resources Act.	Cape Town scoping workshop	
7	Will the guidelines serve all environmental legislation?	Cape Town scoping workshop	The guidelines specifically provide guidance on the role of specialists in EIA processes, regardless which legislation specifies the need for an EIA process to be undertaken.
8	Will guidelines cross-reference e.g. heritage guideline to cross-reference aspects of the visual assessment guideline related to cultural landscapes?	Cape Town scoping workshop	Yes.
9	Through what mechanisms will the guidelines be implemented?	Cape Town scoping workshop	It is proposed that these guidelines be implemented with the willingness of consultants in the interest of "best practice". The guidelines will be used as a standard when DEADP reviews specialist reports. It will therefore be circulated when specialist assessments are requested.
10	What is the expected lifespan of the guidelines? Will they be reviewed and updated on a regular basis?	Cape Town scoping workshop	Yes, as the practice improves.
11	How do the Biodiversity Assessment guidelines relate to the Fynbos Forum Biodiversity Assessment guidelines?	Biodiversity focus group workshop George scoping workshop	The Biodiversity Assessment guidelines will integrate and build on the work done to date by the Fynbos Forum.
12	How do these guidelines related to the EIA	Biodiversity focus group	These guidelines complement the golf course

	guidelines being developed for golf courses?	workshop George scoping workshop	and polo field guidelines. The latter concentrates on the application process and includes locational aspects.
13	Has a guideline for the surface water assessment been considered as part of the series?	Charel Bruwer EnviroAfrica Environmental Planning and Impact Assessment Consultants	The current set of guidelines is the first in the series. DEA&DP will consider commissioning a guideline on surface water in the next round.
14	As you have a long sensitive coastline in the W Cape - could you also please look at specialist studies to do with this sensitive coastal zone. For example, impacts on dunes and dune processes.	Max Clark African Sky Projects	The current set of guidelines is the first in the series. DEA&DP will consider commissioning a guideline on impacts in the coastal zone in the next round.
15	There are national guidelines (NDOT) for the preparation of Traffic Impact Assessments and that might be the reason why it is not on the list. In our experience traffic issues are often high on the public's list of concerns and some thought about it, will probably do no harm.	Hein Stander, BKS	The current set of guidelines is the first in the series. DEA&DP will consider commissioning a guideline on traffic impact assessments in the next round.
16	Perhaps you could include guidelines for socio-economic impacts.	Cape Town scoping workshop Basie Smalberger Dr Shakti Malan	The current set of guidelines is the first in the series. DEA&DP will consider commissioning a guideline on socio-economic impact assessments in the next round.
17	Guidelines needed for the participation of historically disadvantaged individuals.	Cape Town scoping workshop	The current set of guidelines is the first in the series. DEA&DP will consider commissioning a guideline on public participation in historically disadvantaged communities in the next round.
18	Perhaps you could include guidelines for agricultural impacts?	Cape Town scoping workshop Basie Smalberger	The current set of guidelines is the first in the series. DEA&DP will consider commissioning a guideline on agricultural impact assessments in the next round.
19	Will guidelines be developed for other specialist studies e.g. air pollution guidelines.	Cape Town scoping workshop	The current set of guidelines is the first in the series. DEA&DP will consider commissioning a guideline on air pollution assessments in the next round with the Directorate: Pollution and Waste.
20	Do the guidelines address all industries, or only specific ones?	Cape Town scoping workshop	The guidelines aim to be applicable to the full range of development applications requiring an

21	Do the guidelines cover non-renewable resource related activities and the rezoning of industrial/commercial land?	George scoping workshop	EIA to obtain statutory approval. They can also be applied to developments that do not legally require an EIA, but where this is undertaken as a matter of best practice and environmental due diligence.
22	I am interested in ensuring that guidelines are developed for EIAs on mine properties in all provinces (incl W. Cape), and keen to ensure that EIA guidelines extend to the impacts of mining well beyond the lease areas.	Isabel Weiersbye Wits University	The guidelines will provide guidance on how direct, indirect and cumulative effects of developments should be assessed within the specialist domains.
23	The guidelines should identify useful sources of information and minimum reference requirements. This section of the guideline should be regularly updated (e.g. have a "live" list on the government website). Limitations of the list reference should be specified in the guidelines (e.g. not suitable for detailed planning).	Cape Town scoping workshop	The guidelines include a list of recommended reading.  DEA&DP in conjunction with other relevant organizations will strive to maintain a database of contemporary literature and information to inform the EIA process.
24	In order to avoid the duplication of specialist studies and reduce unnecessary delays, there is a need to establish centralized information storage facility(ies)/website(s) where the results of previously accepted specialist investigations are stored and readily accessible for use in EIA processes.	George scoping workshop	DEA&DP is planning to implement a web-based Geographical Information System (GIS) and Application System that will allow access to previous applications.
25	EIA reports and specialist reports must be made publically available	Cape Town scoping workshop	This is planned during an application process when the level of public participation is determined.
26	There is a concern that there is an overall lack of capacity amongst specialists to provide inputs to the large number of applications for environmental authorization.	George scoping workshop	It is envisaged that these guidelines promote the development of and competency of practitioners.
27	The guideline should clarify the difference between the EIA practitioner and the specialist.	Cape Town scoping workshop	Roles and responsibilities have been clarified in the <i>Guideline for determining the scope of specialist involvement in EIA processes</i> .
28	Specialist involvement should include a decision-tree to determine when a specialist is needed, appropriate terms of reference and explicit criteria for assessment and evaluation of impacts.	Cape Town scoping workshop	These aspects have been covered in the various guidelines.
29	The guidelines should explain how the specialist's involvement adds value to the EIA process	Focus group workshops	The role and purpose of specialist involvement during different stages of the EIA process is

			clarified in the <i>Guideline for determining the scope of specialist involvement in EIA processes</i> .
30	The guidelines should clarify what the precautionary principle means in practice. Does uncertainty immediately trigger a “no authorization” response, or does it trigger the need for more careful and detailed monitoring of potential impacts?	Cape Town scoping workshop	This issue of uncertainty is addressed in the specialist guidelines. Specialists need to identify where uncertainty exists and discuss the implications of this uncertainty.
<b>Guidelines for determining the scope of specialist involvement in EIA processes</b>			
<b>Timing – When should a specialist be involved in the EIA process?</b>			
31	The guidelines should clarify when in the EIA process it is best to consult a specialist. Does one consult a specialist when there is an issue of doubt i.e. when there is inadequate information to make a decision?	George scoping workshop Cape Town scoping workshop	This is covered in this guideline.
32	The guidelines should clarify whose responsibility it is to determine whether or not a specialist is required, who appoints the specialist, who drafts the terms of reference and to whom the specialist is responsible to.	George scoping workshop Cape Town scoping workshop	Responsibilities of different roleplayers are addressed in this guideline.
33	The guidelines should clarify the role of the municipality/local authority in specialist assessment and review.	George scoping workshop	The role of commenting authorities (i.e. non-decision-making authorities) is discussed in both the <i>Guideline for determining the scope of specialist involvement in EIA processes</i> as well as <i>Guideline for the review of specialist input into the EIA process</i> .
34	Prior to involving a specialist, it is the responsibility of the EIA practitioner to identify and evaluate available information to determine the need for specialist involvement.	George scoping workshop	Agreed. This is included in this guideline.
35	Steps that the EIA practitioner should follow to determining the need for a specialist study: <ul style="list-style-type: none"> <li>• Consulting existing information</li> <li>• Obtain specialist opinion (if triggered by the review of existing information) to determine whether or not more detailed/comprehensive specialist involvement is required.</li> </ul>	George scoping workshop	Agreed. This is included in this guideline.

36	Specialists are currently involved too late in the process; not possible to halt development or to inform the design so as to avoid unnecessary loss of biodiversity.	Cape Town scoping workshop	Agreed. The guidelines promote the earlier involvement in the EIA process, where the need for specialist input is triggered (i.e. during the pre-application planning and screening stages). Specific triggers for when to involve specialists have been identified in the specialist guidelines.
37	Specialists should be involved in planning design phase of the project.	Cape Town scoping workshop	
38	Specialist assessment should be undertaken prior to any land use planning/development proposal to determine the sensitivity in the environment.	Cape Town scoping workshop	
39	Specialists should be involved as early as possible in the environmental impact assessment process to identify issues as early as possible, support positive planning and save money.	George scoping workshop Cape Town scoping workshop	
40	A current concern is that there is a general perception that specialist studies automatically convert an Integrated Environmental Management/environmental assessment process into a full EIA, rather than just being seen as input to scoping.	Cape Town scoping workshop	The guidelines promote the focussed, appropriate involvement of specialists in EIA processes to provide the right information at the right time to decision-makers.
41	If specialists are to be involved as early as possible in the EIA process, provision must be made in the legal requirements for EIA to allow specialist involvement in the scoping phase.	Cape Town scoping workshop	The guidelines aim to reflect generic best practice and do not clarify or discuss current legislated EIA process requirements.
42	Timing varies with respect to project and environmental sensitivity.	Cape Town scoping workshop	Agreed. This is clarified in the guideline.
43	A clear framework is required to assist in the early identification of key issues and aspects of importance.	George scoping workshop	Agreed. This is included in the guideline.
44	Identification of issues is the responsibility of all roleplayers: EIA practitioner, specialists, authorities, the proponent and other I&APs	George scoping workshop	Agreed. This is included in the guideline.
45	Specialists should be involved in brainstorming workshop at the outset of the project to identify issues with the EIA practitioner.	Cape Town scoping workshop	The guidelines promote the involvement of specialists in the identification of issues. A brainstorming workshop is one approach to achieving this.
46	Specialists should be involved to fulfill different requirements at different stages of the EIA process: <ul style="list-style-type: none"> <li>• Application/screening phase: Provision of baseline information</li> <li>• Scoping phase: Identification of TORs for</li> </ul>	George scoping workshop Cape Town scoping workshop	The different types of input that specialists can provide at different stages of the EIA process is described in the guideline.

	<p>further specialist assessment</p> <ul style="list-style-type: none"> <li>Assessment phase: Assessment of impacts</li> </ul>		
47	There is a need for the iterative involvement of specialists.	Cape Town scoping workshop	Agreed. This is promoted in the guideline.
48	The need for specialist impact assessments could be avoided through the proactive identification of reasonable alternatives (at the early stages of project planning and design) that avoid impacts from occurring.	George scoping workshop	Agreed. This is promoted in the guideline.
49	If it is clear that the development will not receive environmental authorization, do not commission additional specialist inputs.	George scoping workshop	The guidelines promote the early involvement of specialists in the pre-application planning/screening phase in order to identify potential fatal flaws upfront. This aims to reduce waste of effort later on in the process.
50	Specialists should not be involved for the purpose of delaying the EIA process.	George scoping workshop	Agreed.
<b>Scope – What aspects should be covered by the specialist?</b>			
51	The guideline should distinguish between specialist assessment and opinion.	Cape Town scoping workshop	The guidelines refer to specialists “involvement” and “input” in order to indicate that specialists can be involved for a range of purposes (i.e. not just impact assessment) and to different levels of detail.
52	The need for the specialist study, as well as the approach and methods adopted should be logical and clearly motivated.	George scoping workshop	Agreed.
53	The guideline should clarify when and what is sufficient specialist input to inform decision.	Cape Town scoping workshop	This will depend on the nature of the project and the environmental context, however, the guidelines promote the principle of providing relevant, timeous information to support decision-making.
54	The type of specialist assessment, the level of involvement, as well as the specialist terms of reference are influenced by both the site and the project (scale and nature).	George scoping workshop	Agreed. These factors are addressed in the guidelines.
55	The scope of specialist involvement can often only be determined later in the EIA process, therefore phased, flexible budgets are required to increase/decrease specialist involvement as required.	Cape Town scoping workshop	Agreed. This is promoted in the guideline.
56	Clear terms of reference for specialists are required.	George scoping workshop	Agreed. This is promoted in the guideline.

57	Standardised terms of reference are needed to enable decision-makers to understand what the issues were and thereby compare apples with apples.	Cape Town scoping workshop	Model Terms of Reference for specialist input are included in the guideline. This indicates the elements that should be included in TORs. The specific contents of TORs cannot be standardized as the timing and scope of specialist input needs to take into account the specific circumstances of the project.
58	Guidelines should indicate minimum requirements of terms of reference	Cape Town scoping workshop	
59	Terms of reference for specialist should be informed by the public scoping process and by the authorities requirements.	George scoping workshop	Agreed. Other means of identifying issues are included in the guideline i.e. the identification of issues should not just rely on public and authority scoping processes.
60	Guidelines should specify that specialist terms of reference are developed in consultation between the EIA practitioner and the specialist through an iterative process.	Focus group workshops	Agreed. This is promoted in the guideline.
61	Specialists should co-draft terms of reference, indicating their expectations for "free and true" involvement	Cape Town scoping workshop	
62	A balance is required between collecting sufficient information to inform the decision, but at the same time avoiding exhaustive studies that provide very little valid additional info for decision-making.	Jonathan Crowther, CCA Environmental (Pty) Ltd.	Agreed. The guidelines promote the focussed, appropriate involvement of specialists in EIA processes to provide the right information at the right time to decision-makers.
63	Specialist baseline surveys shouldn't be informed by the development proposal in order to avoid biasing the outcome of the survey.	George scoping workshop	Project information is considered necessary in order to ensure that the specialist input is correctly scoped. This shouldn't reduce the objectivity of the specialist.
64	The specialist description of the legal and planning context must take into account existing Spatial Development Frameworks, bioregional plans, other legislation and the outcomes of previous, related environmental assessments. Implications of the legal and planning context for the development application must be made explicit.	George scoping workshop	Agreed. The guidelines promote the use of existing information and the identification of gaps and contradictions in the legislation, policies and plans.
65	The regional and planning context must be taken into account in order to identify potential cumulative impacts.	Cape Town scoping workshop	Agreed. This is promoted in the guidelines.
66	Specialist impact assessments should not be included in the scoping phase or in the baseline studies describing the affected environment.	George scoping workshop	Whether or not it is appropriate to assess impacts during the earlier stages of the EIA process, depends on the nature of the proposed project.

67	The content of specialist impact assessments should include the following: <ul style="list-style-type: none"> <li>• Site and regional context</li> <li>• Holistic assessment of construction, operations and decommissioning phase impacts.</li> <li>• Alternatives</li> <li>• Direct, indirect and cumulative impacts</li> <li>• Technical feasibility of project</li> <li>• Management and mitigation measures</li> <li>• Recommendations for monitoring that are responsive to changes over time.</li> </ul>	George scoping workshop	Agreed. These are covered in the guidelines.
68	There is a need for greater interactions between specialists.	George scoping workshop	Agreed. This is promoted in the guidelines.
<b>Hydrogeological Guidelines</b>			
69	The following guidelines should be reviewed: <ul style="list-style-type: none"> <li>• DWAF Soil &amp; Groundwater pollution Guidelines: <a href="http://sa-remediation.co.za/">http://sa-remediation.co.za/</a></li> <li>• Australian National Environment Protection Council (NEPC) guidelines and requirements for assessment of soil and groundwater contamination and assessment</li> </ul>	Theo Fischer Environmental Science Associates	Done
70	How do the hydrogeology guidelines relate to the “Draft policy on groundwater abstraction for bulk water supply” of the (then) WCNCB guidelines developed in 2000?	Richie Morris	Concern built into triggers of hydrogeological specialist studies (section 2.1). Concern for the impact of groundwater abstraction on ecosystems is highlighted as an issue to be considered in EIAs (section 2.2).
71	WHEN to do an assessment:  It depends on 3 factors: type of development, size of development and location. Use of chemicals, generation of effluent, etc is obviously a type which will require a groundwater study; of course size also affects this; ie. we all use nasty chemicals at home and generate sewage, but not in large enough quantities to warrant a study. Location is critical. Obvious things are over aquifers, but also near surface waters. Almost all surface waters (rivers, wetlands, etc) have some degree of connection to groundwater, so the closer the site to a surface	Roger Diamond Principal Environmental Officer Waste Management Department of Environmental Affairs and Development Planning Western Cape	Considered (section 2.1)

	<p>body and the more permeable the substrate - as a general rule, coastal sand areas are prime examples of groundwater dependant ecosystems. It is imperative that all wetlands, including damplands and episodic wetlands are included; ie areas that are not lakes every year or that only get moist, but have species that depend on this moisture.</p>		
72	<p>A hydrogeologist is required if there is the potential for a significant impact on groundwater. The following may trigger the need to involve a hydrogeologist:</p> <ul style="list-style-type: none"> <li>• The project uses groundwater</li> <li>• The project produces waste products or uses materials that have the potential to pollute groundwater.</li> <li>• The project is located in a stressed catchment as identified by DWAF</li> <li>• The project is located in an area where there is significant use/reliance on groundwater</li> <li>• The project is located in a groundwater recharge area</li> <li>• The project is located in an arid area</li> <li>• The project creates the potential for saline intrusion</li> <li>• The project is located in an area where there is a strong link between groundwater and terrestrial or aquatic ecosystems</li> <li>• The project impacts on wetlands or springs</li> <li>• The project is located in an area where the geotechnical and soil characteristics allow for rapid filtration of pollutants to the groundwater.</li> <li>• Any mining and quarrying activity</li> <li>• A request by DWAF or DME during the EIA scoping phase based on their available information and experience.</li> </ul>	Cape Town scoping workshop	Considered (see section 2.2)

73	<p>Aspects to consider when doing a groundwater impact assessment: Groundwater studies must not only provide info on the present state of the groundwater, but also how that has come to be, how the proposed development could affect the groundwater and what can be done to avoid any negative impacts.</p> <p>1. Present state of groundwater: quality, quantities, depth and distribution of aquifer; relations to surface waters, interaction with vegetation, possible recharge and links to deeper aquifers, supplying distant springs, etc.</p>	<p>Roger Diamond Principal Environmental Officer Waste Management Department of Environmental Affairs and Development Planning Western Cape</p>	<p>The environmental context is one of the key triggers for specialist hydrogeological input (section 2.1). Guidance on the approach and methods to a hydrogeological specialist study have been included in section 3.3, while guidance on how to assess and describe impacts are given in section 4.5 (including emphasis on the avoidance of negative impacts).</p>
	<p>2. If aquifer is anthropogenically affected, how that has happened: brief mention of contaminants, eg, nitrates and phosphates from fertilizers, how serious is the problem, is it a problem at all, what is expected if land use continues as is, are any measures necessary; this is not strictly dealing with the development as these could be adjacent issues, however just as a landowner is responsible for alien vegetation clearing even though those aliens most likely moved across from neighbouring ground, a developer should have a degree of responsibility or at least awareness of the groundwater on their site and have the knowledge to deal with it, or to shove the blame onto whoever is or was responsible; the developer should not feel that they will always be able to shove the problem aside because it came from somewhere else - they have just inherited it, but inherit it they have and therefore will have to deal with it; so it's in their interests to find out about it!!</p>		<p>This is part of the description of baseline conditions and is dealt with through the approach outlined in section 3.</p>
74	<p>3. How proposed development could affect groundwater: 2 components here - what is taken out and what goes back in:</p> <p>3.1 Firstly, what is taken out - if the developer wants</p>		<p>The assessment of the resource potential is not specifically mentioned, as this is not necessarily part of the EIA process.</p> <p>The need for management of the resource</p>

<p>to use groundwater they must prove the resource and put in place firm monitoring plans and plan B if their monitoring shows that they have overabstracted; AT ALL TIMES EMPHASIS SHOULD BE PLACED ON REDUCING DEMAND FOR WATER - design your industry or gardens so that less water is required - integrate this part of the gw report with the development plan and water use design eg rain water tanks, grey water re-use system, water efficient devices and even ASR (aquifer storage and recovery) where appropriate, which brings us to the next point...</p> <p>3.2 Secondly, what goes back in this includes what doesn't go back in; ie the impact of paved areas and taking runoff away from aquifer; quantity and quality of effluents, can they be discharged to groundwater - who else uses groundwater - people, for what uses and ecosystem, directly, indirectly, etc.; is it possible to do minor on site treatment and then dispose to aquifer - this may be beyond scope of groundwater report as it deals more with development processes, but these things should be considered. It is desirable to use aquifers as storage, but essential that quality must not be compromised even over very long term; guidelines must be set for quality of water entering aquifer.</p>		<p>(including demand management) is emphasized.</p> <p>Impact of contaminants and activities that increase or reduce recharge is considered under the "activity types" that trigger the need of specialist hydrogeological input to the EIA process.</p>
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75	<p>4. What can be done to avoid or reduce negative impacts: already some things mentioned above, but the idea is to let the natural environment guide the development; so in areas of hard rock with low permeability clay soils, beware of things like salt build up in irrigated areas – i.e garden needing lots of water is maybe not appropriate, as in sandy areas planting high nutrient demand gardens will result in nutrients being washed into aquifer as sand does not hold nutrients well, careful irrigation and careful and appropriate use of organic composts, etc can help mitigate, etc, etc these are just examples of how the groundwater report needs to be part of the development plan.</p>	<p>Roger Diamond Principal Environmental Officer Waste Management Department of Environmental Affairs and Development Planning Western Cape</p>	<p>Considered under triggers (2.1) and management actions (4.5)</p>
	<p>To emphasize, groundwater reports are often stand alone scientific reports that state some data and little more. The groundwater report should be seen as integral to any major development as groundwater is a major resource and can save millions of rands and lead to healthier environments if the aquifer, when present, is understood and becomes part of the development. Equally in areas with little groundwater, there are still considerations over fracture flow and soil water. The development really should be an integrated thing so instead of having some developer dreaming up a development, be it a factory or housing estate or tourist lodge, and then finding a piece of land to plonk this development, and THEN coming up with a few `add-ons` as to how to avoid the groundwater, not touch it, leave it alone, or suck it dry and flush the sewage away, the groundwater should be considered as part of the development. How can we use it and look after it to benefit the development and the downstream environment.</p>		<p>Section 3</p>
76	<p>Some basic management principles. Try and use less water. Make use of the site - rain, surface and groundwater. Try and internalise impacts - ie process sewage on site; use rain water instead of diverting to stormwater; use natural plants and</p>	<p>Roger Diamond Principal Environmental Officer Waste Management Department of Environmental Affairs and Development Planning</p>	<p>Section 4.5</p>

	animals - they've been there for millions of years and know it better than we do.	Western Cape	
77	I think it is critical that soil pollution and groundwater assessments be seen as integral - especially where the assessment investigates existing activities. Insofar as it concerns new developments, background soil quality data must also be collated.	Theo Fischer Environmental Science Associates	Sections 1.3.4, 2, and 3.1.
78	The hydrogeologist must take into account the significance of the groundwater resource and the potential for cumulative effects.	Cape Town scoping workshop	Considered under the environmental contexts that trigger specialist input (section 2.2), while the assessment of cumulative effects is considered under section 3.2.4.
79	Seasonal differences need to be taken into account in a hydrogeological impact assessment	Cape Town scoping workshop	Described under the section that deals with defining the time and space boundary of the assessment (section 3.2)
80	Groundwater related issues operate over long time periods and large spatial scales. This needs to be taken into account in the assessment.	Cape Town scoping workshop	Considered
81	The assessment should consider different scenarios and associated impacts, management actions and recommendations.	Cape Town scoping workshop	Scenarios are dealt with in section 3.2.3.
82	Can one de-link the exploratory phase impact assessment from the EIA required for bulk abstraction?	Cape Town scoping workshop	No distinction is made between the phases of a development. Specialist involvement is encouraged at the earliest possible stage of a development. The purpose of the water supply is not considered. Instead emphasis is placed on the environmental context in which that development occurs (vulnerability).
83	The hydrogeological assessment must identify the need for broader, strategic level assessments if required.	Cape Town scoping workshop	Considered. Not necessarily required as part of a hydrogeological specialist study. Important that the hydrogeological assessment consider the study area's strategic planning.
84	Characteristics of a good quality hydrogeological impact assessment include the following: <ul style="list-style-type: none"> <li>• Where modelling is used assumptions and parameters must be specified.</li> <li>• Provides evidence that key groundwater references were referred to.</li> </ul>	Cape Town scoping workshop	Section 5.
<b>Visual Guidelines</b>			
85	City of Cape Town has visual guidelines for	Cape Town scoping workshop	Contact person: Keith Wiseman

	communication masts that could inform the visual guidelines.		
86	City of Cape Town has draft environmental guidelines for outdoor advertising that can inform visual guidelines.	Cape Town scoping workshop	Contact person: Clive James or Debbie Evans
87	Guidelines should clarify the purpose, scope and implementation of visual impact assessment.	Cape Town scoping workshop	Agreed. Section 4 of the Visual Guideline deals with the role and timing of specialist visual input
88	Guidelines should define what is meant by a "sense of place".	George scoping workshop Cape Town scoping workshop	Agreed. Section 2 of the Visual Guideline deals with principles and concepts of visual input, incl. 'sense of place'.
89	How does the definition of "sense of place" translate into a defensible finding on significance?	Cape Town scoping workshop	Box 10 (Section 10.2) deals with significance, under 'landscape integrity'.
90	The need for a visual impact assessment should be triggered by the local context/sense of place i.e. if the scale or nature of the development is out of context, and in cases where there is high public sensitivity.	George scoping workshop	Agreed. Section 5, Triggers for specialist input deals with context, particularly in Table 1 and Box 2.
91	The need for a visual impact assessment should be triggered by above normal height, size/footprint, style/type and colour.	Cape Town scoping workshop	Section 6, Box 2 deals with Categories of development, as a trigger for VIAs.
92	Issues that should be taken into account: <ul style="list-style-type: none"> <li>• Impacts of developments on ridgelines</li> <li>• Protection of man-made and natural view corridors</li> <li>• Landscape context and sense of place</li> <li>• Socio-cultural issues related to visual impacts</li> </ul>	George scoping workshop	Agreed. Section 5 deals with triggers for visual input, incl. sites of cultural significance. Socio-cultural aspects are not overtly covered.
93	Aerial viewpoints/photos are not appropriate	George scoping workshop	Agreed. Sensitive viewpoints are generally selected, incl. those identified by IAPs, as mentioned in Section 8.6, Box 7.
94	Guidelines should make reference to possible simulation techniques and models such as Star Dust and the Visual Resource Management Model	George scoping workshop	What is 'Star Dust'? Reference is made to digital simulation techniques in Section 8.6, Selecting the Appropriate Approach.
95	Guidelines should include possible management actions, such as consideration of colour, roof finishes and lighting effects.	George scoping workshop	Agreed. Recommendations for Management Actions are dealt with in Section 10.8.
96	Characteristics of a good quality visual assessment include the following:	George scoping workshop	Agreed. These aspects are covered in Sections 9.1 and

	<ul style="list-style-type: none"> <li>• Describes activity, including footprint area, plan, height and form (i.e. broken up or block type structures)</li> <li>• Clear description of the site and the visual aspects considered in the assessment</li> <li>• Description of existing architecture on the site and in the surroundings (if relevant).</li> <li>• Reference to existing plans and previous assessments</li> <li>• Describes view shed (as the basis for identifying impacts and possible mitigation options)</li> <li>• Clear, understandable graphics that accurately reflects what the development would look like if it is constructed.</li> <li>• Graphics developed from a sensitive view point</li> <li>• Takes into account sun and wind angle to assess impacts and propose management actions that maximize natural heating and cooling effects.</li> <li>• Considers impacts on ridgelines</li> <li>• Consider social/cultural issues e.g. impacts on sense of place.</li> <li>• Consider visual intrusion of multiple different styles of development on the sense of place.</li> <li>• Use of recognized categories of “grading” visual impacts (e.g. as provided in Visual Resource Management Model)</li> </ul>		<p>9.2, Essential Information, and in Section 12 Evaluation Criteria.</p> <p>The grading of visual impacts is dealt with in Sections 10.2 Defining impact assessment criteria, and 10.3 Establishing thresholds of significance.</p>
97	<p>Characteristics of a good quality visual assessment include the following:</p> <ul style="list-style-type: none"> <li>• Considers “sensitivity” of the area and visual backdrop.</li> <li>• Considers visual impact from near and far and from all directions.</li> </ul>	Cape Town scoping workshop	<p>Agreed. See previous issue. These aspects are covered in Section 8.6, Box 7, and Section 10.2, Box 10.</p>
98	<p>The visual impact assessment must consider linkages with biodiversity, social and economic impact assessments.</p>	Cape Town scoping workshop	<p>The Visual Guideline cross refers to Heritage and Economic assessments. A social guideline is not included in the series at present.</p>

99	Guidelines should clarify the qualifications required to undertake a visual impact assessment.	Cape Town scoping workshop	Agreed. Qualifications, skills and experience are covered in Section 7.
<b>Economic Guidelines</b>			
100	Economic assessments can usually be simplified by linking to social impact assessment to answer: "who wins and by how much".	Cape Town scoping workshop	Social Impact assessments do usually not address the question of opportunity costs, and therefore could not be seen as a simplified economics assessment.
101	Economic assessment must be framed within the concept of sustainability and the contribution to poverty reduction.	Cape Town scoping workshop	A special section on the use of environmental economic tools has been included.
102	Triggers for an economic assessment include: <ul style="list-style-type: none"> <li>Any use of/change of use of high intensity agricultural land use.</li> <li>Any industrial/commercial development where change of land use is a listed activity</li> </ul>	Cape Town scoping workshop	If there is a chance that economic impacts are likely to influence the decision on whether a project is desirable on balance and / or influence the development path selected for the project, an economic specialist study should be initiated.
103	The economic assessment report must highlight the economics of alternative uses as well.	Cape Town scoping workshop	Agreed, but as long as those alternatives have been identified and are used throughout the EIA study.
104	Need financial viability information for each alternative so that trade-offs can be considered.	Cape Town scoping workshop	Agreed, but as long as those alternatives have been identified and are used throughout the EIA study.
105	Economic impact assessment must consider effects on existing similar uses (e.g. filling stations) to determine how much income is lost by others.	Cape Town scoping workshop	The crowding out or displacement effects should be standard in economic evaluation of larger scale projects.
<b>Heritage Guidelines</b>			
106	City of Cape Town has a draft cultural heritage policy/strategy that could inform heritage guidelines	Cape Town scoping workshop	Contact person: Melanie Atwell The City Council draft heritage policy has been scrutinized and relevant policies/approaches have been incorporated into the guideline.
107	Must liaise closely with Heritage Western Cape in terms of scope	Cape Town scoping workshop	Heritage Western Cape has been informed of the formulation of the guideline. It will be tabled again at a HWC workshop to be held on 23 April 2005.
108	Heritage assessments (and guidelines) should not only consider archaeological aspects. Other aspects such as architecture are important as well.	Cape Town scoping workshop	The broadening of the scope of what is considered "heritage" is captured in the NHR Act and is discussed in the guideline.
<b>Biodiversity Guidelines</b>			
109	Guidelines should take into account current biodiversity conservation and assessment initiatives	George scoping workshop.	Agreed. Reference to these will be included. Since much of the draft Fynbos Forum

	and guidelines such as the Garden Route Initiative, the STEP Handbook and the Fynbos Forum Guidelines.		guidelines will essentially be absorbed into the DEA&DP guideline, they will not be referenced. Part of the draft Fynbos Forum guideline is to be published by as a stand-alone document, namely Ecosystem-Specific guidelines for the Western Cape. This document (in preparation) will be referenced.
	Guidelines must refer to the new South African vegetation map, the National Spatial Biodiversity Assessment and broad and fine scale conservation plans.	Cape Town scoping workshop	Agreed.
110	<p>The need for involving a biodiversity specialist should be triggered if:</p> <ul style="list-style-type: none"> <li>• The area is a Greenfield site</li> <li>• The area has been identified as a priority area through existing conservation initiatives</li> <li>• No information is available about the site.</li> <li>• Affects ecological corridors</li> <li>• The site is considered to have global importance.</li> </ul>	George scoping workshop.	These considerations will be included in the guideline.
111	<p>A biodiversity specialist is required if there is the potential for a significant impact on biodiversity. The following may trigger the need to involve a biodiversity specialist:</p> <ul style="list-style-type: none"> <li>• The project is located on a Greenfield sites, virgin or unbuilt land.</li> <li>• Project is located in coastal areas and may impact on the marine environment</li> <li>• The project has the potential for knock-on effects (e.g. stimulate other developments) that will impact on biodiversity.</li> <li>• Need identified by an authority or biodiversity institute (e.g. Cape Nature, NBI)</li> <li>• Need identified following review of ecosystem specific guidelines that define key/critical processes.</li> <li>• Project has the potential to affect critically endangered, endangered or vulnerable ecosystems or species.</li> </ul>	Cape Town scoping workshop	These various point are dealt with in different sections of the guideline; mainly in sections on triggers for involving a biodiversity specialist, key issues requiring specialist involvement, indirect and cumulative effects, risks and uncertainties.

112	Vegetation sensitivity mapping can be a useful screening tool that can be used to trigger when to do a full biodiversity or vegetation study.	George scoping workshop	Reference is made to systematic conservation planning products, and involvement of a plant, terrestrial, freshwater or marine ecologist, to determine the need for additional studies. Sensitivity mapping could form one of these studies, if deemed appropriate.
113	Biodiversity assessments must take into account potential impacts on both pattern (composition and structure) and process (functions), including risks of alien invasion resulting from the development.	Cape Town scoping workshop	Agreed; these considerations are included in the guideline.
114	Landscape, connectivity and disturbance must be taken into account in considering spatial components of ecological processes.	Cape Town scoping workshop	Agreed; these issues are incorporated in sections on process.
115	For the biodiversity study, its vital that invertebrate / arthropod assessment is included. They form about 70% of our total biodiversity but studies usually include just plants, furry animals, feathered beasts, and occasionally, cold-blooded vertebrates. Pollinators, for example, are also an important component of our biodiversity and impacts on them can affect plant biodiversity. About 50% of our orchids are pollinated by different moth species etc.	Max Clark and Peter Hawkes African Sky Projects	The main points of this submission have been incorporated into the guideline. However, it is beyond the scope of the guideline to include detailed TOR for every type of biodiversity study.
116	Taxonomic botany should be the core of vegetation surveys, however, there is insufficient capacity in South Africa to do this.	George scoping workshop	Agreed. The approach of the guideline is to make optimum use of existing and available expertise and information, for the guideline to be practicable.
117	We are increasingly being called upon to do Vegetation Surveys for a range of people as we have both the knowledge and the resources to do this locally. We are dismayed at the fact that so often it is almost too late to really make a significant input into the final decisions arrived at about developments. We are in the process of planning how to assimilate as much data as possible as quickly as possible from a wide range of data holders from many sectors so that it would be possible for planners to be more proactive in setting limits before sale for areas which are specially vulnerable or important environmentally.	Yvette van Wijk Garden Route Botanical Garden Trust incorporating the Southern Cape Herbarium, & IMITHI Medicinal Plant project,	The guideline advocates a proactive, positive planning approach, rather than a reactive, 'end of pipe' one.

118	<p>As a fynbos ecologist who has been involved in biodiversity surveys as part of EIA's my major concern relates to vegetation surveys in fire-prone and species rich vegetation communities that typify the South Western Cape. Typically surveys are undertaken over short time frames and only once. The result is a temporarily skewed analysis that does not take into account seasonality (many plants only flower and are identifiable for short periods during the year) or stage in post-fire succession (many plants only appear and flower in the early stages after fire, while others are only identifiable once they mature a number of years after fire). Last year I presented a paper at the Fynbos Forum on this topic. This was the result of a seven year vegetation survey at Grootbos Nature Reserve. The results showed that an initial detailed three month survey of the reserve (during the favourable winter months) resulted in the identification of 301 indigenous species of which 16 were Red Data species. Through ongoing surveying between 1997 and 2005 the total species list for Grootbos now stands at 659 of which 53 are Red Data and two are new to science. Yet often field biologists are expected to make an assessment of a proposed development site in the space of a few weeks or even days and often in the middle of summer. These give no real indication of the biodiversity value of the site.</p>	<p>Sean Privett Conservation Director Grootbos Private Nature Reserve</p>	<p>This example has been included in the guideline, to illustrate the importance of allowing sufficient time and resources for accurate biodiversity surveys.</p>
119	<p>Specialist study must have been undertaken in an appropriate timeframe and season.</p>	<p>Cape Town scoping workshop</p>	<p>Agreed; the section in the guideline on time and space boundaries addresses this point.</p>
120	<p>There is insufficient capacity and time to do specialist surveys for all Greenfield sites. Potentially addressed through the proactive identification of alternatives that avoid the issue of concern.</p>	<p>George scoping workshop</p>	<p>Agreed. The guidelines emphasise that early identification of potential problems or potentially significant issues, tied with consideration of alternatives – preferably in the pre-application phase – could avoid the need for protracted and costly specialist studies and an EIA stage.</p>
121	<p>Specialist must take into account national and regional conservation targets.</p>	<p>Cape Town scoping workshop</p>	<p>Agreed. Sections on information requirements, as well as on setting levels of acceptable</p>

			change, address this point.
122	Ecosystem specific guidelines should spell out the “so what” of biodiversity maps and plans.	Cape Town scoping workshop	The guideline cross-references the Ecosystem-Specific Guidelines currently being prepared by the Fynbos Forum and the Botanical Society
123	Specialists should support the “no net loss” principle.	Cape Town scoping workshop	Agreed; this principle is fundamental to biodiversity assessment.
124	If development is proposed in an endangered ecosystem, the activity should only be considered if there are significant offsets accompanying the development. If the development is proposed in a critically endangered ecosystem then the application should result in a “no go” outcome.	Cape Town scoping workshop	This point targets decision-makers, but is taken up in the sections on risks and mitigation, and generally when evaluating significance.
125	Specialist assessment should recommend rehabilitation with indigenous species.	Cape Town scoping workshop	This point is addressed in the section on rehabilitation and restoration.
126	Specialist must identify requirements for ongoing monitoring to check the accuracy of impact assessment and management actions.	Cape Town scoping workshop	This point is included in the sections on mitigation and monitoring.
127	Biodiversity assessment is a planning informant and not an excuse to badmouth development.	Cape Town scoping workshop	Agreed.
<b>Specialist Review Guidelines</b>			
128	There is a need for greater consistency amongst specialist studies, within and between different regions.	George scoping workshop.	This series of guidelines aim to improve consistency in the quality of specialist input to the EIA process.
129	Authorities need to develop specialist expertise in order to review and comment on specialist reports. If this expertise is not available inhouse then a panel of external experts should be established to assist with the review of specialist reports.	Cape Town scoping workshop	Noted.
130	Municipalities often lack the capacity to review EIAs and specialist reports.	George scoping workshop.	This is noted. The guidelines aim to help develop review capacity, however, the need for independent peer review may still be desirable.
131	The guidelines should clarify the role of review specialists.	Cape Town scoping workshop	Done.
132	There should be greater independent peer review, as well as reviews by the public and authorities.	George scoping workshop. Cape Town scoping workshop	Noted.
133	In my opinion if a specialist assessment is merited then review is merited. Apart from quality controlling the assessment review enhances issues such as independence and objectivity.	Robin Carter Specialist consultant in applied marine sciences	Noted. The guidelines describe the triggers for review by different types of reviewers.

134	The guidelines should clarify the qualifications, membership of professional association, and experience required to provide a specialist opinion or assessment in the EIA process. Too many people consider themselves specialists on the basis of attending a 3 or 5 day short course.	George scoping workshop. Cape Town scoping workshop Derek Engelbrechts	Qualifications, skills and experience required to provide specialist input is outlined in the specialist guidelines.
135	Perhaps qualifications or publications in scientific journals should be acriteria for appointing specialists. If a person does not fulfill these, an independent panel could consider applications from someone who want to be considered a specialist. As a minimum, a specialist should be a registered SACNASP or equivalent scientist.	Derek Engelbrechts	
136	Reviewers should be as carefully selected as are the specialist contributors, after all the EIA can stand or fall on either of the steps.	Robin Carter Specialist consultant in applied marine sciences	Agreed. Qualifications, skills and experience required to review specialist input is outlined in the review guideline.
137	Ideally reviewers should be obviously qualified for the review task, be independent of both the EIA proponent, consultant and specialist, be experienced not only in the specialist field but also in review, and be of sufficient standing/reputation that the default position is to accept the review conclusions. In South Africa all of these are hard to find in any one person, unfortunately.	Robin Carter Specialist consultant in applied marine sciences	
138	Verifiable data (e.g. voucher plant specimens) must be lodged in a secure and accessible place.	George scoping workshop.	Noted.
139	To be fair to the specialist report contributor, the linked review should only be on whether the specialist met the respective terms of reference. Whether the terms of reference are appropriate or complete in themselves should be the focus of other review steps in the EIA. Hopefully any problems or shortcomings in the TORs should have been fixed before the specialist report/assessment was commissioned.	Robin Carter Specialist consultant in applied marine sciences	The guidelines encourage terms of reference to be discussed and agreed upon between the specialist and the EIA practitioner. The specialist is therefore jointly responsible for the terms of reference underpinning their input. The appropriateness of the terms of reference should, therefore, be considered by the reviewer. However, it is agreed that ideally the review of TORs would have taken place earlier in the EIA process and not on completion of the specialist study.
140	Quality of specialist reports are often limited by the lack of baseline data. Decision-makers need to balance the precautionary principle with the need for	Cape Town scoping workshop	Noted. The guidelines highlight the importance of explicitly stating any constraints and uncertainties.

	human development.		
141	What is the weight (i.e. value) of a specialist study that is heavily qualified as a result of insufficient baseline data?	Cape Town scoping workshop	As long as these limitations are clearly stated, it should give decision-makers a clear indication of the risks associated with authorizing a development in the light of high levels of uncertainty.
142	Quality is achieved through inter-specialist cooperation and integration of reports to cater for the interconnected nature of the environmental system, impacts and mitigatory knock-on effects. To achieve this specialists must have access to all process information and other specialist inputs.	Cape Town scoping workshop	Agreed. This is promoted in the guidelines.
143	Review should ensure that where there have been changes in model data, and the results are relevant to other specialist studies, that the revised model results have been used by the other specialists.	Cape Town scoping workshop	
144	Review should check whether the right resources have been used, the right questions asked and the right ethics applied.	Cape Town scoping workshop	
145	Review should check that the level of detail contained in the specialist report is appropriate to the scale of the development and the questions being asked.	Cape Town scoping workshop	Agreed. The <i>Guidelines for the review of specialist input into the EIA process</i> include a checklist of questions to guide reviewers, which reflect these elements.
146	Characteristics of good specialist reports should include the following: <ul style="list-style-type: none"> <li>• Specialist's executive summaries should be translated into both English and Afrikaans</li> <li>• Glossary of terms</li> <li>• Qualifications and experience of the specialist</li> <li>• User friendly and logical</li> <li>• Simple explanation of technical concepts</li> <li>• Clear, non-technical language</li> <li>• Clear graphics</li> <li>• Reflect the outcomes of interactions between different specialists on the project team.</li> <li>• Reference list</li> </ul>	George scoping workshop.	
147	Good specialist reports should include the following: <ul style="list-style-type: none"> <li>• Clear, logical and accessible reports</li> </ul>	Cape Town scoping workshop	Agreed. The <i>Guidelines for the review of specialist input into the EIA process</i> include a checklist of questions to guide reviewers, which

	<ul style="list-style-type: none"> <li>• Glossary of terms</li> <li>• Clear statement of confidence levels and limitations of the study</li> <li>• Provide evidence of having used and referenced available data/information.</li> <li>• Provide evidence that local knowledge was incorporated.</li> <li>• Assessment of impact significance is based on transparent and scientifically sound, context specific analysis.</li> <li>• Clear conclusions and recommendations.</li> <li>• Recommendations should be practical, auditable actions</li> <li>• Time components associated with recommendations should be clearly specified.</li> </ul>		<p>reflect these elements.</p>
<p>148</p>	<p>The review should focus on whether the assessment meets the set terms of reference. Additional questions such as the following can be asked:</p> <ol style="list-style-type: none"> <li>(1) Is the assessment focused in that it concentrates on the relevant aspects of the problem whilst being sufficient (but not parsimonious) for the purposes of the EIA.</li> <li>(2) Does it appropriately incorporate the relevant literature/reports.</li> <li>(3) Are the assumptions explicit and qualified.</li> <li>(4) Are the hypotheses (where used) indeed falsifiable by the data invoked in the assessment.</li> <li>(5) Are alternative hypotheses/interpretations presented and, if rejected, clear justifiable reasons given?</li> <li>(6) Is there any element of bias in the assessment (this can be for or against the development)?</li> <li>(7) If statistics are used are these appropriate?</li> <li>(8) Are the conclusions drawn based on the material in the assessment, i.e. not invoked from other, non-analysed sources?</li> </ol>	<p>Robin Carter Specialist consultant in applied marine sciences</p>	<p>Agreed. The <i>Guidelines for the review of specialist input into the EIA process</i> include a checklist of questions to guide reviewers, which reflect these elements.</p>

149	Take care not to be too prescriptive in setting review guidelines and the associated problem of being too complex. By definition reviewers should be experienced and therefore know what is expected of them.	Robin Carter Specialist consultant in applied marine sciences	Noted.
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