PROPOSED RESERVE DETERMINATION OF WATER RESOURCES FOR THE CATCHMENTS OF THE OLIFANTS AND LETABA

COMMENTS AND RESPONSE REGISTER

NOVEMBER 2017

This Comments and Responses Register (CRR) captures the issues raised by stakeholders during the gazetting of the Reserve of water resources for the Olifants and Letaba Catchments. The purpose of this report is to ensure that the concerns and comments raised by stakeholders are noted and adequately considered and where appropriate satisfactorily addressed through the gazetting process. All written submissions received from stakeholders will be summarised in the register and it will be updated on a regular basis during the course of the gazette process.

STAKEHOLDER COMMENTS ON OLIFANTS-DOORN RESERVE

COMMENTATOR(S)	COMMENTS, QUESTIONS AND ISSUES	RESPONSE(S)
Joint Water Forum	1. At the outset it should be noted that the proposed reserve determination of water resources for the Olifants and Letaba Catchments runs into some 80 odd pages of highly technical data and through its sheer volume and technical information and jargon one is not sure who this document is really intended for (i.e. the technical specialists or the ordinary citizen interested in water) and if intended for the interested citizen there are huge gaps in the document in terms of explanations or general information to assist the reader to place the data in context.	The Reserve is a highly technical document. The gazetted information is a culmination of a very long and continuous process, starting from the Classification, determination of RQO's and the determination of the Reserve. However, supporting documents and reports are available on DWS website or on request from the Department.
	THE FIRST APPROACH IS A SUSTAINABILITY ASSESSMENT PROCESS	
	2. The rationale for applying the sustainability assessment process is premised on the basis that the definition of the reserve refers to "people who are now or who will, in the reasonable near future either rely or take or supplied with water" and securing "ecologically sustainable development". The definition of Sustainable Development is well entrenched in South African legislation, for example in the National Environmental Management Act and referred to in King IV Principles of Good Governance.	The issue of sustainability assessment framework was raised with the objective of determining the extent the current water governance regime (i.e. the proposed reserve determination) adheres to comprehensive set of sustainability criteria and where it lacks compliance. It must be pointed out that the Reserve is subsequent to a robust Classification and RQO process which looks at substantial balance between ecological, economic and social impacts. One can conclude that the section of the comment is misplaced.
	3. Whilst the Brundtland Commission's definition of sustainable development was developed in 1987 and this concept was brought through into South African Environmental and Water law in the 1990s, some 20 years on, the word 'sustainable development' is now frequently supplanted by 'sustainability' as the shortened version and assumed equivalent.	
	4. Sustainability assessment is essentially an organised approach to deliberation and decision making and can be applied to almost anything where there is potential to arrest decline and foster progress towards sustainability at any scale, any players and in any context.	
	5. The objective of this assessment is to determine to what extent the current water governance regime (i.e. the proposed reserve determination) adheres to comprehensive set of sustainability criteria and where it lacks compliance.	
	6. Annexure "A" sets out the sustainability assessment framework and the various questions and criteria to assess the proposed reserve determination.	

	In summary the assessment reads as follows:				
	The framework is used in determining whether significant adverse environmental effects are justified and whether the proposed reserve determination as set out in Government Gazette of 22 September 2017 is acceptable in its present form for publication and implementation.	YES	MAY BE	NO	
	Sustainability criteria to predict the effects and risks of the proposed reserve determination and to identify uncertainties				
	Ecological impacts, benefit, risks and uncertainties				
	Economic impacts, benefits, risks and uncertainties				
	Social and cultural impacts, benefits, risks and uncertainties				
	Fair distribution of effects, risks and uncertainties				
	Present versus future generations				
	Integration				
	Principles to guide the thinking in the light of the range of positive and negative effects of the proposed reserve determination;				
	Maximum net gains				
	Avoidance of significant adverse effects				
	Principles of fairness				
	Explicit justification				
	CONCLUSION ON SUSTAINABILITY ASSESMENT FRAMEWORK				
	7. The core conclusion is that in order for the proposed reserve determination to make a net contribution to sustainability, it has to strive to provide net environmental, net social and net economic benefits. Furthermore, the benefits, impacts, risks and uncertainties should be distributed fairly both geographically and between current and future generations.				The purpose of the Reserve is to protect aquatic ecosystems by ensuring the integrity and aquatic health of water resources are maintained or not degraded to an unsustainable state. The Reserve aims to ensure that by maintaining and protecting the ecological integrity of water resources, they continue to provide goods and services into the future, contributing to the net environmental, net social and net economic benefits. The Reserve therefore does meet this goal.
	COMMENT ON THE CONCLUSION				
	8. The sustainability assessment process throws up many questions regarding the usefulness of the proposed reserve determination document as it stands at present. To highlight this the impression				The gazette document as presented may not be user friendly to all persons, but the Reserve determined has been based on the best available information sources at the time of drafting and has included a

	is reached that this document is being rushed on the back of incomplete information; this is a complex document and doubt that communities at grassroots level have an understanding of the implications; from a catchment perspective is there sufficient understanding of the complex issues impacting upon the resource in the catchment?	number of technical assessments and studies and has been informed and directed by discussions with key stakeholders. It is based on a scientific/technical process that specifies requirements that must be met in the water resource from a flow and quality perspective to meet the requirements of aquatic biota and vegetation and basic human needs. It is accepted that the catchment is faced with complex issues, but the implementation of the Reserve is to ensure that a level of protection of the water resources in line with the water resource class (an ecological category to be met) and to ensure a basic water supply to communities directly reliant on the water resource.
	THE SECOND APPROACH IS A READ-THROUGH COMMENTARY	
	9. One continually reads publications and statements from the Department of Water and Sanitation (DWS) of the issue of sustainability. Just recently in an invitation to stakeholders to attend the Upper Olifants Catchment Management Forum meetings the following statement is made "as the custodian of South Africa's water resources, the DWS is committed and focused to ensuring water resource management sustainability."	
	10. The document is essentially a set of numbers and a set of Ecological Specifications, with little motivation and nor substantiation given in the Gazette. It may be more meaningful if one had access to the supporting documentation.	Point noted. The reports are made available through the DWS website. The link is: Water Resource Classification System – Current Studies
	11. The numbers seem to be based on a scientific assessment only, as there is no evidence of stakeholder inputs or of regional economic assessments – thus consideration of overall viability and sustainability. In terms of the National Water Act stakeholder participation and social and economic assessments are seen to be essential to the process for final determination of the Reserve. (Preliminary Reserve could be based on scientific assessment only).	The Reserve is a scientific assessment. It specifies flows, water qualities and ecological criteria to maintain a level of aquatic health. Two round of stakeholder engagements were undertaken prior to publishing of the draft Reserve gazette (25 and 26 May 2016; and 29 and 30 November 2016), in addition Classification and RQO's had a robust stakeholder engagements. The Reserve has been determined in accordance with the Water Resource Classes and Resource Quality Objectives determined for the water resources in the catchment as required in terms of Regulation 810 Gazette 33541, and as published in Government Gazette No 39943, 22 April 2016. Determination of the Water Resource Classes included the regional socio-economic assessment of the implications of various ecological scenarios. Determination of the water resource classes included as part of the announcement process, an advertisement was placed in various national newspapers and the first Project Steering Committee (PSC) meeting of the study was held on 18 February 2011 at Loskop Dam. Meetings with the Chamber of Mines were held on 7 April and 2 June

		2011. A meeting with the Mpumalanga Tourism and Parks Agency and SAN Parks was held on 27 June 2011. A Technical Task Group Meeting was held on 7 July 2011, also at the Loskop Dam. A second PSC meeting was held on 8 November 2011. A further Technical Task Group meeting was held at Loskop Dam on 31 January 2012 and PSC meeting 3 was held on 15 May 2012. Subsequently three stakeholder meetings on the study have been held on 17, 18 and 19th July 2012 to present the findings of the scenario evaluation and economic assessment. Three stakeholder meetings on the Letaba Classification and RQO determination have been held on 12 March 2013, 31 October 2013 and 03 April 2014 and the public meeting was held on 14 June 2014. The economic complexities of the catchment has been accounted for and the stakeholders have been engaged on this. The JWF was a key stakeholder during the economic assessment undertaken during the Water Resource Classification study. Startling assessment made by JWF, its either they didn't attend or follow the Classification and RQO's process.
	12. Has the Department exhausted its public participation processes during determination of the Recommended Ecological Category? If so, did the participants have full insight into the practical, social and economic consequences thereof? From an international perspective if one looks at the South West Yarragadee Water Supply Development in Western Australia and the Lower Churchill Hydropower Project in Labrador, Canada the pushback by communities was so intense, notwithstanding prior consultation processes, these projects had to be amended.	Yes the Department has undertaken participation process to engage on the proposed Reserve. The Recommended Ecological Category serves to maintain a level of protection in the water resource, and prevent degradation and an unsustainable water resource. This is the mandate of the Department. For the most part of the catchment the recommended ecological category is to maintain the present ecological state which is primarily C and D categories. This state indicates hard working river systems with substantial impacts. The Reserve is aimed at ensuring that these resources do not degrade to E and F states that would result in fish and vegetation dying off, and the unsustainable resources. In such circumstances, the goods and services provided by the resources would cease, impacting on the communities significantly. If anything, the Reserve is aimed protecting the livelihoods and of the communities. Also see the answer above. Kindly note that the gazetted information was prevalent to the 8 step gazetted information.
	13. Has the Department tested what the impact of these numbers on the yield of the system will be at various points?	Yes. This was covered in the scenario analysis and was discussed in the stakeholder meetings. It is very clear that the JWF has not been properly briefed by the representatives who attended the meetings, as we have proof that there was a representative.

	14. Clause 2(6) on page 111 calls for immediate implementation on signature by the Minister. Is this practically possible, or must Compulsory Licencing first be applied?	Yes, the Reserve will apply from date of signature by the Minister. This will trigger the need for compulsory licensing if the department so wish.
	15. How does the Reserve at EWR 16 where the river flows into Mozambique compare with the international obligations?	An Inco-Maputo agreement exists between South Africa and Mozambique that as a specific Annexure on water quality monitoring, but this is still to be implemented. There are however no specific requirements around instream flow requirements or ecological health.
	16. The combined volume of EWR flows at the confluence of the Olifants and Blyde Rivers is 288 mil cub m/year (EWR 11 = 169 and EWR 12 = 119. Total = 288.) A short distance downstream at EWR 13, and with little contributory flows in between, the required flow is 400 mil cub m/year. Have the systems models been run to determine from which upstream points the additional releases need to be made? What are the impacts thereof?	The system has been modelled using the DWS Water Resource Planning Model. A rule has been included in the model to draw water from the upstream dams to meet the requirements of EWR 16 in the Kruger National Park (Ecological Category C, which requires a flow of 400 mil cub/year). The modelling results indicated that EWR 13 was also receiving this flow requirement, and was then set at a C category, maintaining the same flow at this upstream site. This EWR is driven by the Kruger National Park requirement. If the flow in the river at EWR 13 does not meet the EWR an operational plan/tool is to be developed to operationalize the implementation of the Reserve.
	17. It is very difficult to make meaningful comment on the water quality part without having seen the supporting documentation. The other complicating factor is that the level of detail is beyond the capability of many ordinary citizen interested in water.	The water quality specifications relate to the ecological water quality requirements of the aquatic ecosystem. The specifications are based on the ecological category that must be attained and are related to aquatic health and integrity. Unfortunately the physical parameters are scientifically determined, which may be confusing to a lame person. Reports cannot be gazetted, only the template is gazetted with reports or supporting documents on the website.
	18. The question is why rush the publication and implementation of this document especially as extensive studies by the DWS on the groundwater-surface water interactions along the Olifants River are currently under way. The outcomes are expected sometime next year. The numbers in this section should therefore be provisional.	JWF did not provide sufficient information on the study for the Department to verify if the study is relevant, the Department is unsure on which study JWF is referring to. On the contrary there is no rush, the Classification study for the Olifants and Letaba catchment was started in 2011 and 2012 respectively and after 6 - 7 years we can't say this is a rush.
	19. Table 8.1 from page 176 onwards gives a lot of Ecological Specifications. Most of these appear to be very idealistic/theoretical. Who will be responsible for implementation; who to monitor and enforce; what are the time lines and budgets? Many of these are clearly outside the jurisdiction of the DWS – such	Through the process of co-operative governance. Key lead authorities who by the way were part of the process will make sure that the monitoring process is done. This is discussed and monitored in Catchment Management Forums.

	as “Red Data bird species must be maintained” on page 184. Even with respect to the items directly within the domain of DWS, there is serious doubt whether anything will be done.	
	20. Other specifications are superfluous to existing requirements/legislation – also on page 184 “No new dams should be constructed without a detailed authorisation process”. Who will still uphold these requirements in 10 years’ time?	Environmental Impact Assessment (EIA) process should be detailed to assist in the water use authorisation process. Regulatory authorities should be involved.
	21. As a general observation the document is very difficult to understand and certainly the average citizen who may be applying for a licence may find this information beyond his reach. The point is that if the proposed reserve determination is/are the “rules of the game” surely there needs to be some way of demystifying this process.	The Department in the issuing of the water use authorisations will ensure that any conditions will account for the requirements of the Reserve. The applicant will not require an in depth understanding of the technical detail, but be aware that an ecological category must be met, which may have potential implications on water quality and quantity depending on the current level of water stress in the catchment.
	22. If the proposed reserve determination is the “rules of the game” then one questions the veracity of the target ecological category (TEC). A target indicates that this is not a fixed item/number but having a propensity to move. If one applies the soccer analogy to the rules of the game, if the touchline was merely a target then surely there would be chaos on the soccer field as to where the field of play is.	In the context of the Reserve, the TEC refers to the ecological category that has been agreed upon and stakeholder consensus based what is practically achievable after the technical analysis of the system. The REC is the scientific requirement, while the TEC refers to the ecological category that can be met based on the scenario analysis. It is not a standard, but an ecological state that must be attained. It is a target to be maintained until the water resource class is revised.
	23. If the TAC is a “target” how can one hold the Department accountable to ensure that they enforce the standard which they have established.	The Reserve is legally enforceable thus ecological categories and ecological specifications must be attained. The Department in terms of the National Water Act, is mandated to ensure the Reserve is met.
	24. There is a concern that the document has been built up on data that is not completely confirmed or to a large extent no information is available for example where it states that no water quality site in the area. If this is the case how can one logically justify placing a reserve determination on a certain area? Furthermore how can one rely on such “light” information?	The Reserve determined has been based on the best available information sources at the time of drafting and has included a number of technical assessments and studies and has been informed and directed by discussions with key stakeholders. The statement of ‘no water quality site in the area’, refers to the fact that there is no water quality site in the vicinity of the EWR site, which implies that there is no reference data to inform the assessment of the site conditions pre-development. There is therefore limited understanding of how much the site water quality conditions have changed to current present ecological state. In the Reserve water quality analysis current water quality monitoring data or upstream or downstream sites are relied upon to inform the assessment. While limitations are noted, best available sources were used.

	25. Questions are raised as to the implementation and operationalisation of the reserve determination.	It would have been useful for the Department if the questions raised were stated.
	26. If one is to understand the Olifants catchment in its entirety the provision of real-time information as to the catchment is important. In this regard it is hoped that the "Flow Tracker" application through the Department of water and sanitation will be far more stable in the future.	Noted. The Department is embarking on the Optimisation of the Monitoring Networks throughout the country. This is one issue that will be looked at.
	THE THIRD APPROACH IS A LEGAL VIEW	
	27. A general principle of law is that there should be certainty so that the general public / business can regulate their lives so as to ensure compliance thereof. However, if the document talks of TARGETS does this mean it is merely a guideline or an aspiration and not an enforceable standard? From a legal perspective this surely cannot be ideal as to who should be held responsible for non-compliance.	The Reserve, and TEC is not an enforceable standard. It is an ecological state/level that must be attained in a water resource that is reflective of fish and invertebrate species, aquatic vegetation, geomorphology and instream water quality and flows representative of that river reach. The DWS mandate is to ensure that the ecological category is attained through the enforcement of regulatory instruments and management measures that influence this ecological state. This requires the management of source directed impacts and implementation of resource directed measures so that collectively, these result in the in-stream ecological state.
	28. The environmental flow for the Olifants and in particular out of the flag Boshielo dam has not been catered for in the past. It is known that the flag Boshielo dam is over allocated in terms of licences in terms of the act. If the dam is over allocated how is it that the Department can implement/allocate water for environmental flow? Where does this water allocation come from?	The Reserve is the only guaranteed 'allocation' in terms of the National Water Act. Compulsory licensing or further augmentation of water resources will be required to address any deficits. This Reserve process may trigger the need for Compulsory Licensing.
	29. Is it merely a unilateral implementation with a consequential result that there will be a unilateral reduction of water available to existing licence holders. Has due process been complied with in terms of the Act?	As stated the process is a legal. All the steps has been followed. Hence the decision that this is unilateral is unfounded. The act was established in 2008.
	30. Has a verification exercise been completed for the Olifants catchment in terms of section 35 (1) to (6)? If this verification has not been completed how can a resource determination be completed for implementation?	There is currently a verification exercise and it only relates to water use. The Reserve process only looks at the health of the water resources and doesn't depend on the verification process.
	31. Has a compulsory licensing process in terms of section 43(1) been exhausted? This is especially so as a procedure is intended to be used in areas which are, or likely to be, under "water stress" (for	The culmination of the process may results in Compulsory Licensing if the need arises. In this case the Reserve is an important pre-step in Compulsory Licensing.

	example where the demands for water are approaching or exceed the available supplier, where water quality problems are imminent or already exist, or where the water resource quality is under threat), or where it is necessary to review prevailing water use to achieve equity of access to water.	
	32. The process of a reserve determination cannot be seen in isolation and needs to be read in totality. The National Water Strategy and other documents deal with the issue of inter-catchment transfers. Whilst there are current transfers in place, but it is noted that there are plans to expand such transfers out of the Olifants Catchment and specifically into the Limpopo Catchment. The Olifants Catchment is already a highly stressed catchment and there seems little logic as to why further inter-catchment transfers should be considered. Inter-catchment transfers also impact upon the reserve determination in respect of the ecological sustainability of the Olifants River, and impact upon environmental, social and economic development in the Catchment.	The Reserve is the only guaranteed allocation. The Ecological Water Requirements will have to be met first, even prior to any inter-catchment transfers. The Reserve will be considered in further reconciliation strategies and the decision of further transfers can be made in the light of augmentation options and impacts on the catchment.
	33. For the sake of transparency for all interested and affected parties in the Olifants catchment in terms of section 102 of the Act it is not clear if the international agreements in place between the Department and the Mozambique dealing with water in respect of investigate, manage, monitor and protect water resources, and ensure regional cooperation of water resources and ensure the allocation, use and supply of water also deals with the issue of the ecological reserve determination, have been complied with and what are the views expressed by Mozambicans in respect of this reserve determination.	An Inco-Maputo agreement exists between South Africa and Mozambique that as a specific Annexure on water quality monitoring, but this is still to be implemented. There are however no specific requirements around instream flow requirements or ecological health.
	THE FOURTH APPROACH IS A COMPARISON	
	34. If one compares the Olifants / Letaba catchment proposed reserve determination to the recently published reserve determination for the Olifants / Doorns River in the Western Cape there are several discrepancies between the two documents which raises questions in terms of applicability and consistency when applying principles.	The same template as the Olifants/Doorn was used to draft this notice. There might be variations, however the fundamentals are the same (Reserve presented as water quantity, water quality, Basic Human Needs)
	35. From a very general perspective the format of the two documents do not align (such as paragraph numbering) which makes it very difficult to understand or compare, furthermore the language utilised in the two is different in certain respects which could lead	Refer to the answer above

	to interpretational disputes in terms of application of the determination for example within the two different catchments.				
	36. Some documents contain references to wetland reserves and others do not, and certain documents contain detailed information regarding ecological specifications whilst the other does not.				The Olifanst/Doorn and the Olifants/Letaba are two completely different areas in terms of wetlands. It is currently known that the wetlands in the Olifants/Letaba catchment area are of high conservation value and are largely affected by mining activities. Therefore there is a need for protection.
	37. There are even differences in the schedules with regard to surface water quantity regarding the natural mean annual run-off (NMAR) on the one hand and on the other the mean annual run-off (MAR). This will only lead to confusion in the future.				The study depends on the length of the dataset, whichever dataset is comprehensively reliable was used. The data available detects either NMAR/MAR is used.
	38. Another area of possible confusion is a reference to Groundwater Resource Directed Measures (GRDM) in the one document while the other refers to Groundwater Reserve Determination Results.				Groundwater Resource Directed Measures (GRDM) is the methodology used to generate the Groundwater results.
	39. If one compares for example the definitions for example word "recharge" there are subtle differences as to the definition which raises the question which one is correct?				The Department inspect the definition and didn't find any discrepancies, hence JWF comparison is unfounded
	ANNEXURE "A"				
	SUSTAINABILITY ASSESSMENT FRAMEWORK				
	The framework is used in determining whether significant adverse environmental effects are justified and whether the proposed reserve determination as set out in Government Gazette of 22 September 2017 is acceptable in its present form for publication and implementation.	YES	MAY BE	NO	The application of the sustainability assessment framework methodology in this context is not appropriate. The framework was developed with the intention to assess project or programme sustainability. The Reserve is neither of these, but rather forms the very basis of what makes a water resource sustainable. The Reserve is intended to ensure that a suitable level of protection is provided to the 'ecological use' (aquatic ecosystem). Affording a level of protection enables all users to derive the necessary benefits and uses from the water resource, without comprising its integrity.
	The framework consists of two main components:				
	The **first component** is a set of **sustainability criteria** designed to assist in identifying the range of impacts on sustainability the proposed reserve determination is predicted to have and to work towards minimising adverse effects and maximising benefits.				
	The **second component** is a set of **principles** that set out the proposed approach to residual impacts				

	Sustainability criteria to predict the effects and risks of the proposed reserve				
	Ecological impacts, benefit, risks and uncertainties:				
	Are biophysical systems adequately protected throughout all phases of the proposed reserve determination?				
	Is the long-term integrity of biophysical systems insured and are the irreplaceable life support functions protected upon which human as well as ecological well-being depends?				
	Are the complex interactions sufficiently understood?				
	Potential adverse impacts minimised?				
	COMMENT: There is no supporting documentation to substantiate these issues hence the uncertainty in the veracity of the information				
	Economic impacts, benefits, risks and uncertainties:				
	Does the proposed reserve determination provide net economic benefits to the people living in the Olifants catchment?				
	Does the proposed reserve determination enhance practically available livelihood choices and the power to choose?				
	Does the proposed reserve determination reduce gaps insufficiency and opportunity (and health, security, social recognition, political influence, et cetera) between the rich and the poor?				
	COMMENT: There is no supporting documentation to substantiate these issues hence the negative outcome.				
	Social and cultural impacts, benefits, risks and uncertainties:				
	Does the proposed reserve determination contribute to community and social well-being of all potentially affected people?				
	Is it compatible with their cultural interests and aspirations?				
	How will the proposed reserve determination affect individual communities?				

	How will the proposed reserve determination affect individual communities?				
	Does the proposed reserve determination assist in building the capacity, motivation and habitual inclination of individuals, communities and other collective decision-making bodies to apply sustainability requirements?				
	Does the proposed reserve determination encourage more open and better-informed deliberations, greater attention to fostering collective responsibility, and more integrated use of individual and collaborative collective decision-making practices?				
	Does the proposed reserve determination strengthen individual and collective understanding of ecology and community, foster customary civility and ecological responsibility, and build civil capacity for effective involvement in collective decision-making?				
	COMMENT: There is no supporting documentation to substantiate these issues hence the negative outcome.				
	Fair distribution of effects, risks and uncertainties:				
	The effects, risks and uncertainties fairly distributed amongst potentially affected individuals, communities, regions and other interests?				
	Does the proposed reserve determination carefully consider the geographical distribution of the social, economic and environmental effects, risks and uncertainties of the proposed reserve determination?				
	Will affected individuals and communities have the prerequisites for a decent life and the opportunity to seek improvements that do not compromised equivalent opportunities for future generations?				
	Is the diversity of those whose needs are being addressed appreciated?				
	Is their involvement insured?				

	Does the proposed reserve determination emphasise less materially and energy intensive approaches?				
	COMMENT: There is no supporting documentation to substantiate these issues hence the negative outcome.				
	Present versus future generations:				
	Does the proposed reserve determination succeed in providing economic and social benefits now without compromising the ability of future generations to benefit from the environment and natural resources in areas potentially affected by the proposed reserve determination?				
	Does the proposed reserve determination favour options and actions that are most likely to preserve or enhance the opportunities and capabilities of future generations to live sustainably?				
	Does the proposed reserve determination apply precaution, by respecting uncertainty, avoiding both well and poorly understood risks of serious or irreversible damage to the foundations for sustainability, planning to learn, designing for surprise, and managing for adaption?				
	As the proposed reserve determination will be gazetted can decision-makers act quickly on incomplete but suggestive information where social and ecological systems that are crucial for sustainability are at risk?				
	As the proposed reserve determination will be gazetted is it designed to deal surprise and active adaption, favouring diversity, flexibility and reversibility?				
	Does the proposed reserve determination make provision for established mechanisms for effective monitoring and response?				
	COMMENT: There is no supporting documentation to substantiate these issues hence the negative outcome.				
	Integration:				

	All principles of sustainability applied together, seeking mutually supportive benefits and multiple gains?				
	What happens in any one area affects what happens in all other areas?				
	Is it reasonable to expect, but not safe to assume, that positive steps in different areas will be mutually reinforcing?				
	A sustainable proposed reserve determination requires positive steps in all areas, at least in general and at least in the long-term?				
	Sustainability requires decision-makers to resist convenient immediate compromises unless they clearly promise an eventual gain?				
	COMMENT: There is no supporting documentation to substantiate these issues hence the negative outcome.				
	Principles to guide the thinking in the light of the range of positive and negative effects of the proposed reserve determination.				
	Maximum net gains				
	Does the proposed reserve determination deliver net progress towards meeting the requirements for sustainability?				
	Does it seek to mutually reinforce, cumulative lasting contributions?				
	Does it avoid significant adverse effects?				
	COMMENT: There is no supporting documentation to substantiate these issues hence the negative outcome.				
	Avoidance of significant adverse effects				
	Compromise is acceptable if it avoids further decline risk of decline in a major area of existing concern or if it improves prospects for resolving problems properly identified.				
	COMMENT: There is no supporting documentation to substantiate these issues hence the negative outcome.				
	Principles of fairness				
	No current or future generation should be an unreasonable share of the adverse effects, risks				

	or costs or be denied a reasonable share of the benefits of the proposed reserve determination.				
	No geographic region affected by the proposed reserve determination should bear an unreasonable share of the adverse effects, risks or costs or be denied a reasonable share of the benefits.				
	The proposed reserve determination should make a net positive contribution to sustainability in each of the three main areas: the environment, the economy and social conditions.				
	COMMENT: There is no supporting documentation to substantiate these issues hence the negative outcome.				
	Explicit justification				
	Any compromises on the overall effects, risks and uncertainties of the proposed reserve determination should be accompanied by an explicit and transparent justification based on openly identified,				
	COMMENT: There is no supporting documentation to substantiate these issues hence the negative outcome.				
South African National Parks	1. The Present Ecological State (PES) for B73H within the Kruger National Park is stipulated as a D, with an upward management trajectory to achieve Target Ecological Category (TEC) of a C. This approach to a progressive realisation of improved river condition is appreciated, although falls short of SANParks conservation objectives, where the minimal desirable condition will be a B/C. This purports to the river rehabilitation approach advocated in our previous communications[1] and in-line with the recommendations set out in the EWR quantification report (DWS, 2016).				It is noted that the recommended ecological category is a B/C condition for EWR site 16 in B73H within the Kruger National Park. However based on the scenario and operational analysis of the system, a Target Ecological Category (TEC) of a C is what is currently achievable. The system is in water stress with deficits particularly in the Middle Olifants catchment. A higher environmental flow requirement cannot be supplied from the various dams within the system without severe detriment to other users. While the intention of the Reserve is to ensure the adequate level of ecological protection of water resources, this needs to be done, taking account of the socio-economic consequences in a system wide context. The Kruger National Park is considered a key stakeholder in the system and its conservation targets are noted as being imperative as a nationally protected area. The proposed TEC will result in an improvement in the current state, however the drive to the achievement of the B/C category may remain as a target for any future revisions of the Reserve.

	2. In this respect it is not the intention to contest the allocated volumes to the EWR but rather highlight efficiencies to improve at the local scale especially around the Selati and Olifants confluence. On this basis it is important to note the recently published study by Marr et al (2017) which notes that fish species sensitive to pollution exist in the Olifants river system upstream of the KNP whilst being absent from the KNP itself. This most likely results from the continued pollution effects of the Selati River into the Olifants River in the KNP. In the same study the impacts of the Selati River also reflected also in the SASS scores for macro-invertebrates below the confluence with the Olifants River. Moreover, it is well known that the operations of the Phalaborwa Barrage compromise the ecological viability of the Olifants River immediately downstream through frequent anoxic events as a result of its operations. Thereby, we reiterate that it is the Selati River itself combined with the operations of the Phalaborwa Barrage that are the major constraints for achieving B/C for the lower Olifants in the KNP, and this should be reflected in the gazette. We are of course in agreement with the stringent water quality parameters expressed within the gazette, and the present DWS study: Integrated Water Quality Management Plan for the Olifants is a key enabler to achieve improved river management objectives in the lower Olifants. Moreover recent partnerships2 in the lower Olifants demonstrate that allowing for proactive low flow and pollution early warning systems will make sound contribution to meeting these objectives also.	The findings and recommendations are noted. An implementation/operational plan for the Reserve will have to investigate the constraints and how the system is best operated to achieve the required environmental flows and water quality. The implementation of the Integrated Water Quality Management Plan will ensure the water quality planning limits are met which will provide the water quality in the KNP needed to improve the PES.
	3. In this respect the Ga-Selati (B72K) really needs to be on a higher trajectory than a TEC of D in order to achieve the above recommended targets. Ideally aiming for a C/D at a minimum. It cannot be sanctioned in the gazetted reserve that this small tributary is able to compromise the ecological viability of the larger system within a nationally protected area.	The Present Ecological State (PES) for B72K at EWR site 14b, is an E ecological category, which is largely water quality driven, but also influenced by additional flow at the site due to wastewater discharges. The proposed TEC of a D category is an improvement on the current river condition and will require that a number of source control measures be implemented and complied with. The flow contribution from the Selati to the Olifants Reserve is very low (about 14.14 million m^3/d of the 403 million m^3/d) at EWR 16. The main impact of the Selati on the Olifants River is water quality related. By improving the water quality to meet a D category, the contribution of the Selati to the Olifants water quality will largely be addressed. However, increased flows from the main Olifants River upstream of the Selati is also required to improve the category at EWR16.

	4. Please note also that a discrepancy exists for B73H on p113 of the gazette and B73J on p116: in the case of the former 21.06 % nMAR is allocated to environmental water requirements meanwhile the latter only 14.72 % nMAR is allocated to the environment, of an available total in both cases being 1918.3 Mm3/annum nMAR. The discrepancy arises as B73H is upstream of B73J, with no bulk water abstractions, nor accounting for contributions from the B8 catchment downstream of B73H. In this respect the 21.06% nMAR must translate downstream from B73H to B73J as only very minor abstractions exist in this reach.	Discrepancy noted. The changes were made based on the new information.