

IN THE WATER TRIBUNAL

Case number: WT01/17/WC

Delivered on: 24 January 2022

In the appeal of:

**WEST COAST ENVIRONMENTAL PROTECTION
ASSOCIATION**

Appellant

And

**MINISTER: DEPARTMENT OF WATER AND
SANITATION**

First Respondent

**CHIEF DIRECTOR: WESTERN CAPE DEPARTMENT OF
WATER AFFAIRS**

Second Respondent

**ELANDSFONTEIN EXPLORATION AND MINING (PTY)
(LTD) (KROPZ)**

Third Respondent

JUDGMENT

1. INTRODUCTION:-

This is an appeal in terms of Section 148 (1) (f) of the National Water Act, Act no 36 of 1998, i.e. it is an appeal against a decision of a responsible authority on an application for a water use licence under Section 41. As provided for by the relevant section the appeal is to the Water Tribunal. Chairperson of the Water

Tribunal has also written a judgment and we agree that the appeal should be dismissed. We are however not in full agreement as to whether the conditions in the licence are adequate hence this separate judgment.

2. *THE PARTIES ARE:-*

- 2.1. Appellant is West Coast Environmental Protection Association (WCEPA).
As the name indicates, this is an environmental protection interest group. WCEPA opposes granting of the Water Use Licence to Third Respondent, Elandsfontein Exploration and Mining PTY Ltd (EEM) later called Kropz. There was apparently a name change.
- 2.2. First Respondent is the Minister of the Department of Water and Sanitation, the custodian of the National Water Act.
- 2.3. Third Respondent is the Chief Director: Western Cape Department of Water and Sanitation, the delegated functionary/responsible authority for awarding water use licences.

3. *NECESSARY REMARKS: NATURE OF APPEAL TO THE WATER TRIBUNAL*

The Tribunal is not a court of law, but an administrative appeal body, a full discussion thereof is to be found in the reported SCA judgment, Makhanya NO v Goede Wellington Boedery (Pty) Ltd (2013)1 All SA 526, see paragraph 27 up to and including 31.

4. The defining quality of an administrative appeal is that the Tribunal, in adjudicating the appeal *“steps into the shoes of the original decision maker, as it were and decides the matter.”*¹
5. The following consequences flow from the aforestated defining quality:-
 - (a) Having stepped into the shoes of the original decision maker, the Tribunal is not limited to the information that was before the original decision maker. An appeal before it (the Tribunal) is what is termed a wide appeal, meaning, it may and should take cognisance of any relevant information that comes before it, notwithstanding that that information was not presented or available to the original decision maker.²
 - (b) There is no burden of proof in the strict sense of the term or as understood in civil and criminal proceedings³. The focus of an administrative appeal tribunal is on finding the correct and preferable administrative decision through careful sifting of available evidence without the use of formal rules of evidence.

6. *THE GROUNDS OF APPEAL*

Summarised in the Notice of Appeal they are as follows:-

“[2.1] The Water Use Licence Application should have been refused on [the] basis of available information.

¹ Cora Hoexter Administrative Law in South Africa, 2nd edition (2012) at 65

² Oosgrems Landgoed (Pty) Ltd v The Director-General of the Department of Water and Sanitation and Other (W705/10/2010) at paragraph 62

³ Burden of proof and Standard of proof in the WA State Administrative Tribunal – A Case of Horses for Courses, Bertus De Villiers, University of Queensland Law Journal Vol. 32 (1), P191

[2.2] The information before the decision maker was insufficient to grant a water use licence.

[2.3] The decision was premature, and in contravention of Section 41 (5) of the National Water Act, 36 of 1998.

[2.4] The decision making process was procedurally unfair.

[2.3] The decision-maker failed to be guided by the precautionary principle and public trust doctrine; and

[2.4] The decision maker and its delegated functionaries conducted themselves in a manner creating a reasonable apprehension of bias.

THE LEGISLATIVE CONTEXT, A NECESSARY BACKDROP TO THE GROUNDS OF APPEAL

7. Appellant is appealing granting of an Integrated Water Use Licence (IWUL) to the Third Respondent. The Application for IWUL is in terms of Section 41, National Water Act, Act no 36 of 1998 (the NWA), Third Respondent was granted a water use licence in terms of that section.

8. Section 41 provides as follows:-

Procedure for licence application

[1]An application for a licence for water use must –

(a) be made in the form;

(b) contain the information; and

(c) be accompanied by the processing fee, determined by the responsible authority
(own underlining)

[2] A responsible authority –

(a) may, to the extent that it is reasonable to do so, require the applicant, at the applicant's expense, to obtain and provide it by a given date with –

(i) other information, in addition to the information contained in the application

(ii) an assessment by a competent person of the likely effect of the proposed licence on the resource quality; and

(iii) an independent review of the assessment furnished in terms of subparagraph (ii), by a person acceptable to the responsible authority;

(b) may conduct its own investigation on the likely effect of the proposed licence on the protection, use, development, conservation, management and control of the water resource;

(c) may invite written comments from any organ of state which or person who has an interest in the matter; and

(d) must afford the applicant an opportunity to make representations on any aspect of the licence application.

[3] A responsible authority may direct that any assessment under subsection (2)(a)(ii) must comply with the requirements contained in regulations made under sections 24(5) and 44 of the National Environmental Management Act, 1998 (Act No. 107 of 1998). (Section 41(3) substituted by section 3(a) of Act 27 of 2014)

[4] A responsible authority may, at any stage of the application process, require the applicant –

(a) to give suitable notice in newspapers and other media –

(i) describing the licence applied for;

(ii) stating that written objections may be lodged against the application before a specified date, which must be not less than 60 days after the last publication of the notice;

(iii) giving an address where written objections must be lodged; and

(iv) containing such other particulars as the responsible authority may require;

(b) to take such other steps as it may direct to bring the application to the attention of relevant organs of state, interested persons and the general public; and

(c) to satisfy the responsible authority that the interests of any other person having an interest in the land will not be adversely affected.

[5] The Minister must align and integrate the process for consideration of a water use license with the timeframes and processes applicable to applications for-

(a) licences, permits or rights for prospecting, exploration, mining and production in terms of the Mineral and Petroleum Resources Development Act, 2002 (Act No. 28 of 2002); and

(b) environmental authorisations in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998) or any specific environmental management act.

(Section 41 (5) added by Section 3 (b) of Act 27 of 2014).

9. The provisions of Section 41 cited above elicit the following conclusions :-

(a) The type and nature of the information required for the licence application is in the discretion of the responsible authority. I have for emphasis underlined the legislative choice of the word *may* as opposed to *must*.

(b) It is not mandatory for an Applicant for a water use license to call for public participation.

10. ANALYSIS OF THE GROUNDS OF APPEAL

I deem it fruitful to reorganise the grounds of appeal for systematic exposition.

11. The following appeal grounds will be dealt with together:-

[2.3] The decision was premature and in contravention of section 41 (5) of the National Water Act, 36 of 1998

[2.4.] The decision making process was procedurally unfair.

12. The two grounds of appeal address what may robustly be referred to as a claim for procedural fairness. Appellant's entitlement to procedural fairness derives from the Constitution.⁴ It is therefore implicit in the National Water Act (NWA). I must therefore give due regard to Appellant's grounds of appeal that talk to absence of procedural fairness.

13. Section 41 (5) of the National Water Act provides as follows:-

"The Minister must align and integrate the process for consideration of a water use license with the timeframes and processes applicable to applications for-
(a) licences, permits or rights for prospecting, exploration, mining and production in terms of the Mineral and Petroleum Resources Development Act, 2002 (Act No. 28 of 2002); and

⁴ Section 33 (1) Constitution of the Republic of South Africa, 1996

(c) Environmental authorisation in terms of the National Environmental Management Act, 1998 (Act no 107 of 1998) or any specific environmental management act)”

14. Section 41 (5) was added by Section 3 (b) of Act 27 of 2014. It came into effect on 2nd September 2014.

15. Third Respondent is a mining company or has interests in mining, prior to its being granted a WUL it had successfully secured a mining licence.

16. Section 41(5)(a) is therefore of direct relevance. However one needs to ask, what is the purpose of Section 41(5)(a) and who stands to benefit from its provisions.

17. To properly answer the two questions posed above it will help to also make reference to Section 41(6) of the NWA. The latter provides as follows:-

“Notwithstanding the provisions of Section 148, any applicant (own underlining) for a water use license arising out of the integration process contemplated in subsection (5) who is aggrieved by a decision of the responsible authority, may lodge an appeal to the Minister against the decision.”

18. I believe that Section 41(5) read with Section 41(6) has nothing to do with the Appellant, it not being an Applicant for a WUL. The two sections clearly affect and talk to an applicant for a WUL, hence the right to appeal for this Section is only given to the Applicant for a Water Use Licence.

19. L.J Kotze, arguing for more extensive integration of environmental statutes and intergovernmental functionalities refers to the concept of environmental governance. According to him fragmentation of environmental compliance laws

and regulations is a financial burden to the business sector. He informs that *“it has been reported that the cost of red tape in South Africa amounted to an estimated R79 billion in 2004⁵ (costs incurred by the business sector as a result of inefficient governmental regulation).*

20. Kotze concludes that fragmented environmental legislation further gives rise to duplication of administrative procedures, jurisdictional overlap, and a time consuming and confusing governance effort.⁶ It would seem that Section 41(5) aims at reducing this lamented fragmentation and duplication.

21. Appellant expands on why it is aggrieved by alleged non-compliance with Section 41 (5) by the responsible authority.⁷ The Notice of Appeal has grounds of appeal in summary and expanded form.

22. From Appellant’s heading *“WUL was decided prematurely in contravention of section 41(5)”* only the following pertinent paragraphs need be reproduced herein. *“[126] The WUL authorises the diversion and alteration of two water courses under Section 21(c) and (i) of the NWA, which by the co-ordinates provided will be affected by the pit. It is relevant to note that the experts found that none of the reports listed on the WUL specifically assess the impact on these watercourses, and the necessary mitigation measures. This is a material gap in the iWULA not addressed in the WUL or ROR.*

[127] EEM accordingly intends to commence (or has already commenced) with development within 32 meters of a water course, which is a listed activity under

⁵ L.J.Kotze, Improving Unsustainable Environmental Government in South Africa: The case for holistic governance. Public Environmental Law Journal 2006 (9), p. 75/261.

⁶ Ibid 75/261

⁷ Paragraphs 126, up and including 130, pages 47-48 Appeal Record.

the NEMA EIA Regulations, and which requires environmental authorisation (or rectification) and environmental impact assessment. Furthermore, the development takes place in a national park's buffer zone and the Biodiversity Policy and Strategy for South Africa: Strategy on Buffer Zones for National Parks provides.

National parks butter zones defined in the park management plans, will be considered special areas in terms of Section 24(2)(b) of the National Environmental Management Act, 1998 (Act no 107 of 1998) (NEMA). All development in the buffer zone requiring an environmental authorisation in terms of NEMA will be subjected to an environmental impact assessment process at national level

[128] Development [of the mine] in the buffer zones of National Parks therefore requires full scoping and EIA and a decision at the national level regardless of whether NEMA merely requires a basic assessment.

[129] Given that an EIA process was reasonably foreseeable to the decision maker both when the iWULA was lodged and when the decision was made, and given the material data and assessment gaps, the appellant is of the opinion that the correct course of action would have been for the decision maker not to make the decision until after the NEMA EIA process caught up with the iWula process with a view to comply with Section 41(5) and for the deficient iWula to benefit from the assessments made in terms of EIA process. {all underlinings are mine}

[130] The WUL decision is accordingly premature, and because a mandatory and material procedure or condition prescribed by an empowering provision was not

complied with this decision is indefensible and reviewable under section 6(2)(b) of PAJA. For this reason, the Appellant argues that even if the decision is set aside, and referred back to the decision maker, the decision maker cannot decide on IWULA unless and until is it aligned with the NEMA process which must necessarily entail a full scoping and EIA process.”

23. The aforesaid paragraphs are based on a mistaken understanding of the sequence of events involved in the process of applying for mining authorisation and WUL by the Third Respondent. Third Respondent's Heads of Argument set out the process in the following chronology.⁸

24. 17 June 2010, Third Respondent applied for a prospecting right, to the Department of Minerals and Energy(DMR), the Department that is the custodian of Act 28 of 2002 mentioned in Section 41 (5)(a), the section of the National Water Act Second Respondent allegedly did not comply with.

25. 30 April 2013, that prospecting right is granted, and on 9th December 2013, Kropz applied for a mining right, same was accepted on 11 December 2013.

26. During December 2013, Kropz submitted a draft scoping report to the DMR. Comments from interested and affected parties (“I & APS”) were invited and collated. Two open day public meetings were held.

27. On 2 May 2014, a revised scoping report was made available for comment by I & APS, and on 18 June 2014, Kropz submitted a draft EIA report and EMPR to the DMR, together with public comments submitted on the revised scoping report.

⁸ Paragraphs 56 up to 68, page 25 to 29, Third Respondent's Heads of Argument.

28. The final EIA report and EMPR were made available for public comment early 2014, further public meetings were held, and additional meetings were held with key stakeholders and state departments.
29. On 20th August 2014, the DMR sent a letter to Kropz in which it listed a number of requirements for the final EIA and EMPR.
30. The final EIA report and EMPR were made available for public comment early in September 2014. Further open day and public meetings were held with key stakeholders and state departments.
31. The DMR granted Kropz the mining right on 26 November 2014 in terms of Section 23(i) of the MPRDA.
32. The above chronology is common cause but I must first refer to the provisions of NEMA to indicate its relevance for the judgment.
33. Section 24(1) of the National Environmental Management Act 107 of 1998 (NEMA) provides as follows:-
- “In order to give effect to the general objectives of integrated environmental management laid down in this chapter, the potential consequences for or impacts on the environment of listed activities or specified activities must be considered, investigated, assessed and reported on to the competent authority or the Minister responsible for mineral resources, as the case may be, except in respect of those activities that may commence without having to obtain an environmental authorisation in terms of this Act”*(Own underlining)

34. According to the definitions section of NEMA, the competent authority in respect of a listed activity or specified activity means the organ of state charged by that Act with evaluating the environmental authorisation in respect of that activity.

35. Further, Section 24 (2) of NEMA provides as follows:-

“The Minister, or an MEC with the concurrence of the Minister, may identify-

(a) Activities which may not commence without environmental authorisation from the competent authority.

(b) Geographical areas based on environmental attributes, and as specified in special development tools adopted in the prescribed manner by the Minister or an MEC, with the concurrence of the Minister, in which specified activities may not commence without an environmental authorisation from the competent authority.

(Section 24 (2)(b) substituted by section 5 (a) of Act 30 of 2013 with effect from 18th December 2014)”

36. The provision of NEMA reproduced above inform as follows:-

(a) An Environmental Authorisation as a compliance requirement in terms of NEMA is mandatory only where the activity to be undertaken is a listed activity and if not complied with is a bar not to the granting of a license to engage in that activity but to the commencement of that activity.

(b) This means that Third Respondent would not be denied a Mining Right License on account of it not having an *Environmental Authorisation* in terms of NEMA, but it would be unlawful for it to commence a listed activity in respect of its mining without first securing an *Environmental Authorisation* in terms of NEMA

37. When Third Respondent embarked on the process for application for a mining right Section 41 (5) had not yet been promulgated and or come into force.

38. It is clear from the chronology that the process commenced with the draft scoping report in December 2013. The final EIA report and EMPR were already available for public comments in September 2014, the same month section 41(5) came into effect.

39. In the circumstances due to the relevant process having been either completed or close to completion at the time of promulgation of section 41(5) of the National Water Act, it was impossible *“for the Minister [to] align and integrate the process for consideration of a water use licence with the time frames and process applicable to applications for:-*

- (a) Licences, permits or rights for prospecting, exploration, mining and production in terms of the Mineral and Petroleum Resources Act 2002 (Act no 28 of 2002);*
and
- (b) Environmental authorisation in terms of the National Environmental Management Act, 1998) or any specific environmental management act.”*

40. Ergo, due to the timing of Third Respondent’s application for a mining right S 41(5) NWA could not be applied.

41. I accept that the intention of the Applicant in arguing for application of Section 41 of the NWA is to tap into the prescribed NEMA provisions for environmental protection because whilst the provisions of Section 41 of the NWA make public participation discretionary, NEMA makes it compulsory.

42. I however take the view that in the specific circumstances of this matter Appellant is not prejudiced by the non-applicability of Section 41(5) for the following reasons:-

43. There is uncontroverted evidence that during the application for the mining right there was extensive public participation, see the chronology of Third Respondent's application for a mining right and Water Use Licence outlined above.

44. In the Third Respondent's affidavit responding to Appellant's allegations that the decision making process was procedurally unfair, the following averments (paraphrased and or summarised herein) are made.

45. That the public participation process commenced in 2013. That during the scoping phase the first Background Information Document (BID) was distributed to the I & APS from December 2013 onwards outlining the applicable approvals requested for the Elandsfontein Phosphate Mine which included authorisations in terms of the NWA.

46. Open house meeting were held on Monday, 6th January 2014 at the Hopefield Self Catering Chalets and Recreational Park, and on Wednesday, 8th January 2014 at the Diaz Rock Hotel Hall, Saldanha Bay. There it was explained that the application process also involves a water use license in terms of the NWA.

47. From the period December 2013 to April 2014, various focus group meetings were held with key stakeholders (listed below) where the project was explained

1. Adjacent land owners
2. Hopefield Landbouvereniging

3. Cape Nature
4. Saldanha Bay Municipality (SBM)
5. SANPARKS, DWS and Cape Research Centre
6. Eskom
7. PGWC Roads
8. Transnet
9. SBM air quality Department

48. What I have reproduced above are merely 3 opening paragraphs, the answering affidavit proceeds to detail in a further 7 paragraphs various processes of the public participation process.⁹

49. As can be seen from above Appellant WCEPA, was not one of the I & APS that participated in the Appellant's public participation process. The uncontradicted view is that it was not yet formed.

50. However, the alleged guiding mind of WCEPA, Ms C. van Zyl apparently participated in the above cited public participation processes that preceded the granting of the mining right. Also, the erstwhile attorneys of the Appellant, Cullinan and Associates confirmed in one of their letters to DWA that members of their client participated in the mining right application and by implication in the public participation process.¹⁰

51. In the ultimate, it is my considered view that there is no merit in Appellant's grounds of appeal that the decision was premature and in contravention of Section 41 (5) of the NWA.

⁹ See paragraphs 144 (i) up to and including 144 (xi)

¹⁰ Letter from Cullinan and Associates, Annexure D, page 99 Appeal Record

52. I now turn to the ground of appeal that the decision making process was procedurally unfair.

53. Appellant expanded on this ground in paragraphs 16-19 of its Notice of Appeal.¹¹

54. The Appellant's complaint falls into 2 broad categories to wit.:-

CATEGORY 1- All I & Aps were denied the current information about the impacts of mining (e.g. about whether the mine would use groundwater). Further, the I & AP's were not afforded a formal opportunity to participate effectively, resulting in their needs not being taken into account. Lastly, the Department of Water Services (sic) allegedly acted in a manner that hindered the ability of the I & AP's to exercise their lawful rights.

55. It is important at this juncture to note that Appellant was not the only stakeholder involved in the public participation process for application for a mining right. I have mentioned above the 11 different state organs and interest groups which according to the Answering affidavit of Third Respondent participated in the public hearings.

56. I mention hereunder only those that appear to me to be clearly concerned with water use and they are;

- (i) *Adjacent land owners* (ii) *Hopefield, Landbouvereniging* (iii) *Cape Nature,*
- (iv) *Sanparks and Cape Research Centre.*

57. For me it is significant that the aforementioned entities were at the time of public hearings concerning the application for a mining right already coherent interest groups or established institutions, whilst Appellant had not yet cohered into an

¹¹ Pages 7-9 Appeal Record.

identifiable interest group, yet none of these entities have joined with the Appellant in this appeal. I will return to this aspect later in my judgment.

58. Appellant complains that it was misinformed about use of groundwater by the mine. That cannot be true because of the following:-

- (i) A letter from Cullinan and Associates, the erstwhile attorneys of the Appellant makes it clear that use of groundwater by the mine was canvassed during the public hearings for application for a mining right.¹²
- (ii) The Meriam Webster online dictionary describes geohydrology as a “science that deals with the character, source, and mode of occurrence of underground water”. It is not in dispute that during the EIA process for application for a mining right there was a report from a specialist consultant on Geohydrology: Geoss: Julian Conrad

59. The second category of complaints concerning alleged procedural unfairness is premised on the following submissions:-

- (i) *The DWS withheld information. The information that was allegedly withheld was the IWULA, and even when the IWULA was made available it was an incomplete document. Also there was a delay of 4 months before the IWUL was provided in terms of PAJA.*
- (ii) *Further, Appellant lodged comments on and objections to the IWULA, informed the DWS that it had commissioned an expert geohydrological review report which it wished to place before the DWS and requested the DWS not to make a decision before considering that report. The DWS*

¹² Paragraph 3 and 5- Letter from Cellinan and Associates to DWA page 102 Appeal Record

ostensibly ignored the Appellant's reasonable request not to make a decision until having received Parson's Review. DWS made the decision on the iWUL before the Parsons Review was tabled before it.(The Parson's Review refer to a report by Dr Parson, this report is analysed later on this judgment)

60. I accept that Appellant suffered from the ineptness and or inefficiency of the DWS insofar as timeous furnishing of information is concerned. I also accept that as a result of the conduct of the DWS officials Appellant must have been prejudiced in its opposition to the granting of the WUL.
61. If the Tribunal had powers to review the decision of the DWS these submissions would carry weight. Regrettably the Tribunal is not a reviewing body. As stated before, this is an appeal in the wide sense. This means that the Tribunal steps into the shoes of the Chief Director and considers the matter afresh.
62. Appellant is now in possession of the iWUL, Dr Parson's Report and its objections supplemented by legal arguments marshalled by its attorneys and advocates are before the Tribunal. All will now be considered.
63. In this regard I find merit and am in full agreement with following response of the Third Respondent to the Appellant's complaint about procedural unfairness *"we note that the WCEDA has presented a comprehensive appeal document setting out its various contentions and concerns and placing purported reliance on various specialist and expert reports. In the circumstances it cannot be contended*

by the Appellant that it has not had an opportunity to present its grounds of concern or that it is prejudiced as its concerns will not be considered”¹³

64. In any event Appellant itself is aware that its submissions, cited above rightly belong to review proceedings because in paragraphs 190 to 192 of its notice of appeal it repeats essentially the same ground albeit in a truncated form and concludes in paragraph 193 that *“Procedurally unfair decisions and decisions upholding procedurally unfair decisions are reviewable under section 6(2)(c) of PAJA.”*

We as the Tribunal cannot therefore set aside the Water Use Licence on the grounds of procedural unfairness.

65. I now turn to examine the next grounds of appeal.

[2.1] The Water Use License Application should have been refused on (the) basis of available information.

[2.2] The information before the decision maker was insufficient to grant a water use licence.

66. I must state that in my opinion the above two grounds are based on the Constitutional injunction mentioned in sections 33 (1) and (2) that everyone has the right to administrative action that is lawful, reasonable and procedurally fair. The emphasis in casu being on reasonableness of the administrative decision. This means that *stricto sensu* this ground belongs to a review application rather than the wide appeal which this Tribunal is seized with.

¹³ Paragraph 114, Third Respondent’s Responding Statement to an Appeal by WCEPA, page 382 Appeal record.

67. Further, I do have difficulties with the approach of the Appellant in presenting its case. The difficulty is as follows:-
68. Appellant separates the available information into silos. In other words it criticises the completeness of the information allegedly available when the responsible authority (Chief Director DWS) granted the WUL, without taking into account later developments which had the effect of supplementing that information.
69. The later developments are the following:-
70. *Licence conditions which inter alia served to safeguard against uncertainties and ensure continuing monitoring.*
71. *The mitigation measures that were put into place and the invoked adaptive management principle.*
72. *The developments that had already taken place in execution of the mining right. As explained by the Third Respondent water use in terms of the WUL is already past the 4 year mark. Clearly, any criticism of the WUL before the Water Tribunal must take into account what is currently happening.*
73. Conversely put, Appellant must in its argument include the state of affairs obtaining at the time of hearing of the Appeal.
74. I am well aware that elsewhere in its papers Appellant does attack the inadequacy of the licence conditions, difficulties in their enforcement as well as non-suitability of adaptive management as a useful tool in the WUL granted to the Third Respondent.
75. Granted these two grounds of appeal do not deal with the information wholistically I will not decide on them. Instead I will proceed with the other grounds of appeal

and at an opportune moment, when that can be comprehensively done address the issue of whether given all the available information, including the information that came post awarding of the WUL, it can be confidently stated that the WUL should be set aside. These two grounds will therefore be subsumed under that approach.

76. I now consider the next ground of appeal "*The decision maker failed to be guided by the precautionary principle and public trust doctrine.*"

77. The National Water Act, including its regulations in terms of NEMA is "*a Specific Environmental Management Act*". In the circumstances it is also encompassed in the National Environmental Management Principles, Chapter 1, NEMA.

78. I therefore accept Appellant's contention that the responsible authority in granting the WUL had to pay heed to the precautionary principle.

Sections 2(4)(a) (vii) and (viii) formulates the precautionary principle as follows:-

"(vii) Sustainable development requires the consideration of all relevant factors including (the fact that) a risk averse and cautious approach is applied, which takes into account the limits of current knowledge about the consequences of decisions and actions; and

(viii) that negative impacts on the environment and on people's environmental rights be anticipated and prevented; and where they cannot be altogether prevented, are minimised and remedied."(own underlining)

79. I note that Appellant did not cite Section 2 (4) a(viii) which as can be seen above is a conjunctive adjunct to section 2 (4) a(vii). I will say more about the relevance of this aspect later.

80. Section 2 (4)(a) mentions the other factors that must be considered as part of National Environmental Management Principles. Relevant for purpose of this judgment are the following:-
81. *Section 2 (4)(a)(i)- That the disturbance of ecosystems and loss of biological diversity are avoided, or where they cannot be altogether avoided is minimised and remedied*
82. *Section 2 (4)(a)(ii)-That pollution and degradation of the environment are avoided or where they cannot be altogether avoided, are minimised and remedied.*(both underlinings are mine)
83. *Section 2(4)(i) – The Social, economic and environmental impact of activities, including disadvantages and benefits, must be considered, assessed and evaluated, and decisions must be appropriate in the light of such consideration and assessment.”*
84. I have reproduced and highlighted the other provisions of NEMA to show that essentially NEMA considerations on sustainability take into account the social, economic and scientific knowledge constraints, this means that, in evaluating their applicability, a balancing act against various competing forces and factors must be undertaken.
85. I find useful the dictum of Rogers J in *WWF South Africa v Minister of Agriculture, Forestry and Fisheries and Other 2019 (2) SA 403 (WCC)* (“WWF”) imported from the New South Wales Land and Environmental Court in *Telstra Corporation Limited v Hornsby Shire Council (2006) NSWLEC 133 AT 208*

86. The dictum appears on the Appellant's expanded grounds of appeal and is as follows:- (I am indebted to Appellants Counsel for this dictum)

"[The precautionary] principle is triggered where two conditions are satisfied, namely that the proposed activity poses a threat of serious or irreversible environmental damage and the existence of scientific uncertainty as to the environmental damage. If these conditions are met, the principle is actuated and there is a shifting of an evidentiary burden of showing that this threat does not, in fact, exist or is negligible. Furthermore, prudence suggests that some margin for error should be retained "until all consequences of the activity are known. Potential errors are weighted in favour of environmental protection, the object being to safeguard the ecological space of environmental room for manoeuvre

87. I also perused the DWS 2008 Impact Prediction Guidelines and read the definition reproduced in Appellant's paper which is *"in the absence of actual data to demonstrate an alternative conclusion, the most conservative assumption will be made and precautionary management measures will need to be appealed"*

88. The DWS document does not explain or define the *"precautionary management measures"*. In the circumstances no value could be derived from it insofar as understanding the precautionary principle.

89. From the NEMA definition cited above, the inevitable conclusion is that the precautionary principle is a difficult to define term whose content is determined by the context and scientific knowledge available to the decision maker. It therefore lies within the discretion of the decision maker.

90. It seems trite to state that in all situations where environmental impact assessment is to be done, scientific knowledge is limited. That is so because the predictions are not on real life scenarios as they happen, but an attempt is being made to do accurate predictions of what will be in the future.
91. Taking the New South Wales case as a point of departure, before one can talk of the need to apply the precautionary principle there must first exist a threat of serious or irreversible environmental damage.
92. This now brings us to the reports of the experts. We will look at the reports that were placed before the Chief Director when he made his decision to grant the WUL, and the reports that came thereafter, this being a wide appeal in the sense that the Water Tribunal is entitled to evaluate both before, during and past WUL information brought before it.
93. Appellant expands on its grounds of appeal based on the precautionary principle as follows:-
94. In two separate Headings:-*(i) Decision maker failed to apply National Environmental Management Principles and (ii) Decision maker failed to protect water resources for current and future generations.*
95. Appellant only makes allegations that Third Respondent has not complied with certain specified provisions of NEMA. That however is not the test for applicability of the precautionary principle as set out in the dictum of the aforesaid Telstra case. For the Appellant to successfully rely on the precautionary principle, it must state its jurisdictional fact, to wit existence of a serious threat of an irreversible harm to the environment.

96. I am mindful of the fact that as the Water Tribunal my duty is not to allocate onus and decide the matter on the probabilities, vis a vis the Appellant and Respondent, this not being a civil appeal. My duty is to try make the best decision based on the available information placed before us as the Tribunal, this being an administrative appeal.

97. The crux of Appellant's objection to the WUL appears in my view in paragraph 22 of its Notice of Appeal.¹⁴ The contents thereof are as follows:-

[22] The expert evidence provided by the Appellant and others indicates that the activities authorised by WUL are likely:-

[22.1] To reduce the availability of ground- water to other water users in the area.

[22.2] to result in potable water water being used for mining instead of from (sic) human consumption within a water stressed area.

[22.3] to degrade the structure and functioning of the Elandsfontein Aquifer.

[22.4] to have significant detrimental impacts on the environment (including pollution from unlined tailings dams)

[22.5] to have significant detrimental impacts on the conservation of the West Coast National Park and the Langebaan Lagoon (a wetland of international significance)

98. Once again I must express my difficulties with the Appellant's presentation of their case. Having identified the six (from 22 up to 22.5) likely effects of the granting of the WUL as determined by the experts one would expect the Appellant to link each consequence with expert evidence. That however has not been done.

¹⁴ Paragraph 22 and its subparagraphs Notice of Appeal, pages 10 and 11 Appeal Record.

99. Instead the Notice of Appeal reverts back to Appellant's recurring theme and submits that "*The appellant relies on the following expert reviews to identify the inadequacies, uncertainties and data gaps in the iWULA¹⁵*" I must say that the inadequacies, uncertainties and data gaps are mercurial concepts which are not amenable to proper analysis. I will therefore concentrate on the reviews of the experts for a more meaningful assessment of Appellant's objection to the WULA.

100. The experts reviews relied on are the following:-

(a) Dr Roger Parson's Review dated 15 March 2017, Annexure K to the Appeal record.

(b) Dr Jaco Nel's Review dated 28th October 2016, Annexure L to the Appeal record.

(c) Dr Kornelius Riemann's 3 reviews. Dr Riemann is a Director of an entity known as Umvoto, consequently his reviews are Umvoto reviews. His reviews address in consecutive order:-

- The Water balance -28 April 2017, Annexure M to the Appeal Record.
- The Water Use Licence – 16 May 2017, Annexure N to the Appeal Record.
- The Water Use Licence: Record of Recommendation (s) 23 June 2017 Annexure O to the Appeal Record.
- Updated Expert Report dated 25/27 November 2019. This report was not annexed to the appeal record, it was furnished subsequent to the directives of the Chairperson.

¹⁵ Paragraph 80, Notice of Appeal page 31 Record of Appeal.

- Report of Colvin Christine, March 2017, Annexure P to the Appeal Record.
- Dr Fred Marinelli, 30 March 2017, Annexure R to to the Appeal Record.

101. Before analysing the reports of the experts it is important to make the remarks below.

102. The report of Dr Parson is the report that Appellant was unable to timeously table before the responsible authority for purposes of deciding on the WUL. It is therefore being considered for the first time.

103. Dr Parson acted on instructions from Cullinan & Associates the erstwhile Attorneys of the Appellant. In his report he states that *“Specifically we were asked to assess whether the iWULA is objectionable and whether adequate and correct information was put before the decision maker”*¹⁶

104. Dr Parson lists his limitations in the review exercise and I will reproduce hereunder only the ones pertinent to this judgment:-

- *Not all of the supporting documents of the iWULA were provided for review. A list of the missing documents is presented as Appendix A of this report. Given the importance attached to monitoring by the consultant, it is problematic that Appendix D--Groundwater monitoring protocol was not provided as part of this review.*
- *The sequence of documents provided in the three files was not in accordance with the table of contents of the iWULA. A number of pages and sections were found to either be misfiled or missing, and reports*

¹⁶ Annexure K, p117 Appeal record

included in the file were sometimes not listed on the IWULA Table of Contents. In essence the documents for review were a shambles. This may result in incorrect conclusions being reached by this review”.

105. I note that Appellant in its Notice of Appeal cites as one of the grounds the fact that IWULA documents were a shambles. Apparently Dr Parson is one of the experts from whence the complaint emanated.

106. Reading the complaint from the report of Dr Parson I fail to understand why such complaint should be placed at the door of the 1st and 2nd Respondents.

107. Appellant had attorneys, Messrs Cullinan and Associates. I do not understand why they did not take it upon themselves to ensure that the IWULA submitted to Dr Parson is at least properly indexed and contains all the reports that are relevant. I have not seen a letter from Applicant’s attorneys requesting at least the Groundwater Monitoring Protocol, a document which is central to the Appellants’ case for purpose of briefing Dr Parson. Clearly they were remiss of their obligations as attorneys, to properly brief the experts.

108. Incompleteness of documentation, more specifically absence of the Groundwater Monitoring protocol was only raised after Dr Parson had done his review.¹⁷

109. Dr Parson’s report has the following recommendations:-

- *It is recommended that the hydro census be redone, and the results properly documented. The current information appears incomplete and*

¹⁷ Annexure A2, Letter from Cullinan and Associates dated 24th March 2017, paragraph 22 thereof, page 87 Appeal Record.

provides a poor record of baseline information regarding existing boreholes and ownership thereof.

(I note that the baseline information which is allegedly of poor quality concerns existing boreholes and ownership thereof. It does not raise the issue of absence of baselines data making adaptive management an incompetent alternative, a point forcefully argued for by the Appellant).

- *Contingency plans need to be put in place in case the volumes of groundwater that have to be abstracted to allow mining to take place are greater than predicted, and if the rate of injection is lower than required.*
- *A single coherent hydrological report based on all the information gathered during the course of the investigation should be required to (a) facilitate the decision maker's properly understanding the documentation and (b) if the proposed mining were to take place, provide a clear record of the undertaking made by the Applicant.*
- *EEM should be held to the design, construction and monitoring specifications stated in the iWULA report and related documents. This can be achieved by your clients participating in the monitoring committee (own underlining).*

110. I have underlined those portions of Dr Parson's recommendations that approved monitoring. It is important to note that monitoring is one of the recommendations which were taken up in the licence conditions.

111. A significant observation for purposes of this judgment is that the Parson's report in its conclusions does not state that the iWULA ought not to have been granted. His conclusion is as follows:-

"It is my interpretation that there are grounds to have various aspects of the iWULA report explained or corrected. In its current form the iWULA neither presents sound nor coherent information and cannot be used as a basis for decision making."¹⁸

112. The question then is would explanation and proper presentation of information change Dr Parson's conclusion. Because no opportunity was sought by Dr Parson from the Second Respondent to have the explanations and corrections, I have to accept that Dr Parson's report is not comprehensive enough for purpose of this judgment because it was put forward without incorporating what Dr Parson clearly saw as needed explanations and corrections.

ANALYSIS OF DR PARSON'S REPORT

113. In order to be meaningful, analysis of Dr Parson's report must be within the context of this judgment, or to be more accurate the Appeal proceedings.

114. At the time Appellant launched the Appeal the iWULA had become an WUL, i.e. the Water Use Licence had been granted. A granted Water Use Licence differs from the Water Use Licence Application in one major respect, the latter sets out conditions for the Water Use. The conditions may, depending on the circumstances be stringent and extensive with the aim of dealing with foreseeable problems envisaged in the authorised water use.

¹⁸ Dr Parson's report, page 124, Record.

115. In the circumstances the report of Dr Parson had one major shortfall, it did not refer to the conditions imposed for exercise of the Water Use licence. It therefore could not opine on whether the perceived weaknesses in the iWUL had been remedied by the conditions imposed on the WUL. Further, Dr Parson's report did not even opine on whether the perceived problems could be investigated.
116. The second limitation of Dr Parson's reports is in its terms of reference. The terms were as follows *"to assess whether the iWULA is objectionable and whether adequate and correct information was put before the decision maker"*
117. I cannot opine as to why Appellant chose to attack the iWULA and the information furnished in it, as opposed to analysing whether the Water Uses applied for by the Third Respondent would if granted be objectionable or not. I am saying so because the iWULA was not a final document. It is for that reason why although SANParks (one of the I & APS) initially objected to the iWULA but later became part of the monitoring committee and did not join Appellant in the Appeal seeking to set aside the WUL.
118. The above terms of reference do not compare favourably with the terms of reference given by SANParks. The SANParks review is titled *"Review of hydrogeological impact of the proposed Elandsfontein Phosphate Mine adjacent to the West Coast National Park."*
119. It is therefore not surprising that the report of Dr Parson does not mount any meaningful scientific criticism against the authorised water uses.

120. Furthermore the following observations of Dr Parson's seem to be in favour of the iWUL.

- [4] SUMMARY OF PLANNED WATER USE¹⁹

From the iWULA report it is my understanding that:

- *Neither the pit nor the dewatering boreholes will extend below the upper Aquifer Unit i.e. the integrity of the aquitard between the Upper Aquifer Unit and the Lower Aquifer Unit will not be disturbed.*
- This observation is an important consideration for this appeal because the clay layer separating the two aquifer units may be pierced during mining thus causing irremediable damage.
- *All the abstracted groundwater (..) will be artificially recharged back into the aquifer via a series of 10 vertical boreholes. This method of artificial recharge is also a routinely used methodology.*
- This observation of Dr Parsons is at odds with the Appellant's criticism of artificial recharge.²⁰
- It is interesting to note that Parson's Report does not take any issue with the dewatering. He therefore did not see it as posing any risk. I took special note of this because Dr Riemann in his reports, more specifically the 25/27 November 2019 expert report laments what he calls the failure to consider the possible impacts of dewatering.

¹⁹ Dr Parson's Report, paragraph 4 page 118

²⁰ Paragraph 132, Appellants grounds of appeal, page 48, Appeal Record

- Water will be supplied to the mine by the Saldanha Bay Municipality. This water use is not subject to authorisation by the Department of Water and Sanitation through the current process.
- I also note that Dr Parson, like the officials of the DWS did not deem it fit to concern himself with water supplied by Saldanha Bay Municipality. That being water outside their regulatory authority.
- *The mine processing plant and waste materials will be positioned on concrete and bunded areas, supposedly preventing the underlying Upper Aquifer Unit from being contaminated.*

It is clear from the above that Parsons accepted the above inbuilt precautionary measure against pollution from the processing plant.

121. Further, Dr Parson states his overall impression of the iWULA as follows:²¹

- *From my knowledge of hydrogeological work conducted in the region, the consultant has gathered and revised most of the available hydrogeological information and literature of the area.*
- *Information presented in the various reports suggests that the consultant followed the (mostly undocumented) norms of the industry in terms of the work undertaken and methods applied.*

122. Dr Parson's report does of course have some criticism of the iWULA on inter alia the following grounds:-

²¹ Paragraph 5.1. Parsons Review, page 119, Appeal Record

[5.4.] Hydrogeological Information.²²

- *Lack of clarity on the thickness and extensiveness of the aquifer.*
- *Absence of a comprehensive review of regional groundwater level data and flow directions.*
- *Failure to address baseline groundwater quality for both the Upper Aquifer Unit and the Lower Aquifer unit using all available hydrochemistry information, i.e. that collected during the current investigation.*
- *Criticism of the pumping tests on the functional efficacy of the reinjection boreholes.*
- *Lack of detail on the hydro census data resulting in uncertainty on the level of groundwater use or dependency.*

[5.5] Numeric Models.²³

- *Three different models compiled different numeric groundwater models for the water use application working with different assumptions, parameterisation, and outcomes causing the numeric groundwater models to be of low confidence and usefulness.*
- *Given the observed differences and uncertainties associated with the numeric models, no contingency plans are documented that relate to higher volumes of groundwater having to be dewatered than predicted, the rate of artificial recharge been (sic) slower than predicted e.t.c. How does EEM plan to deal with such situations.*

²² Paragraph 5.4 Parson's Report, page 121, Appeal Record

²³ Paragraph 5.5 Parson's Report, page 122 Appeal Record.

[5.6] MINING AND IMPACTS.²⁴

- *At no time does the consultant provide an overview of the nature and severity of groundwater contamination that can be expected from an open cast phosphorus mine.*
- *In their Impact and Evaluation report of January 2017, Geoss excluded the processing plant from the impact evaluation as the infrastructure will be positioned on bunded concrete. The possibility of (a) the concrete cracking and (b) contaminants leaking through the concrete into the Upper Aquifer is not considered This omission has to be addressed.*

[5.7] Artificial Recharge²⁵

- *Dewatering volumes do not equate to reinjection volumes meaning that there would be excess water not dealt with.*
- *Pilot tests on reinjection of water were on low volumes than the ones stipulated on the iWUL. The efficiency of the pilots test is therefore questionable.*

123. I accept that Dr Parson's criticism is valid. Further some of the issues he raised were also raised by the other experts, as appears below :-

- Dr Nel, in his review for SANParks ²⁶ observed as follows:-
 - (i) On water quality impact of the mine possibility of leaking of Arsenic, Thorium and Uranium, and also that backfilled apatite could increase Phosphorus, Fluoride and Chloride. He concluded that

²⁴ Paragraph 5.6 Parson's Report pages 122 to 123 Appeal Record.

²⁵ Paragraph 5.7 Parsons Report, page 123 Appeal.

²⁶ SaNParks report, page 140, Appeal Record.

lecheate studies were conducted on solid to water ratios that do not necessarily represent the concentrations expected under field conditions, therefore further data was needed to assess the potential impacts.

- (ii) On Artificial Recharge – Dr Nel’s report states that there are various unknowns regarding efficiency of artificial recharge boreholes. Should some of the borehole mechanisms be less efficient, that could cause water levels to rise to elevations near or above land surface, thus causing artificial wetlands and seepage zones not naturally occurring in the National Park.
- (iii) On the Dewatering:- Dr Nel opined that dewatering of the mine pit to facilitate mining of the phosphate which is apparently located below the Upper Aquifer may affect the Elandsfontein paleo valley and if not mitigated would probably reduce the flow to the Langebaan Lagoon. Further, there may be some drop in water levels towards the Langebaan Road Aquifer.

124. The report of Dr Nel(17 October 2016) for SaNParks is one of the expert reports relied on by the Appellant in attacking the iWUL.²⁷

125. What is however important about the report of Dr Nel, in contradistinction to the report of Dr Parson as well as the other specialist reports of the following experts:-

(a) Dr Kornelius Riemann

²⁷ Paragraph 80, Appellant’s grounds of Appeal page 31, Appeal Record

(b) Christine Colvin

(c) Dr Fred Marinelli

is that only Dr Nel based his review also on site visits and consultative meetings “conducted as part of the independent review of potential impacts” The fact that De Nel’s review was a comprehensive independent study and review of potential impacts means that Dr Riemann was incorrect in his 25/27 November 2019 report when he implied that the Water Use Licence did not pay heed to potential adverse impacts.

126. Further also Dr Nel’s report did not have as its purpose evaluation of the iWUL for review and possible set aside but to put it in the words of the report “*This risk assessment report will be used by SANParks to evaluate the influence of the proposed Elandsfontein Phosphate Mine on the ground water environment. The potential risks and proposed mitigation regarding the changes to the hydrogeological system.*

127. It is therefore not surprising that Dr Nel’s report for SANParks also discusses mitigation measures as well as adaptive management when it discussed the risks. In actual fact one cannot help but be impressed by the thoroughness of Dr Nel’s SANParks Report. It deals with all, the impacts, risks, possible mitigations and constraints on the effectiveness of the latter. It is not surprising that Third Respondent later engaged his services in addressing the Water Use Licence challenges hence his 2017 report as well as his response together with Dr Fanie Botha to Dr Riemann 25/27 November 2019 expert summary. More about these reports later. Further, because Dr Nel’s SANPark

report also dealt with impacts and mitigation it answered most of the questions raised by Dr Parson's Report. I will however highlight same when dealing with the reports of Dr Riemann, that will prevent unnecessary duplication.

128. Dr Nel's SANParks report has the following conclusions.

- *"Although there are many aspects of the groundwater system underneath the Elandsfontein Phosphate Mine Site that is not well understood, the impacts to the West Coast National Park and the Langebaan Lagoon can be managed to mitigate (sic) any mining related impacts that may occur."*(paragraph 12, SANPark Report Page 161 Appeal Record)

129. In the circumstances Dr Nel's SANParks report does not recommend setting aside of the WUL.

130. The next report that Appellant is relying on is the report of Dr Fred Marinelli. The Marinelli report states as follows in its introduction *"as someone who is not familiar with the regulatory process as practiced in South Africa", my comments are more technical in nature and intended to supplement the comments provided by Parsons and Associates.*²⁸

131. Although the Marinelli report makes reference to a licence, the licence had not yet been granted. It was therefore also reviewing the iWUL, and as such shared the weakness of Dr Parson's report, to wit, non-consideration of the licence conditions imposed on granting of the licence.

132. Essentially Dr Marinelli like Dr Parson's raises the following common issues:-

²⁸ Marinelli Report, page 256, Appeal record.

- (i) *Possible problems with dewatering rates*
- (ii) *Possible problems with recharge capacity of boreholes. On this aspect Dr Marinelli poses a new problem compared to Dr Parson, Ms Colvin and Umvoto , when he states that “the issue is not the ability of the aquifer to accept recharge, but rather the ability of the wells to maintain recharge capacity overtime (I assume that when Dr Marinelli speaks of wells he is referring to boreholes).*
- (iii) *According to him there are many case histories where recharge capacity using wells could not be maintained.*
- (iv) *The possibility of the pit backfill becoming a source of mobilised foreign chemicals to the groundwater. Although the language used may be different (Dr Nel refers to leaching tests in geochemical evaluation) the various experts agree on the issue of possible contamination of groundwater by chemicals emanating from the mining activities.*

133. In the circumstances I accept that Dr Marinelli raised real concerns that needed to be addressed but similarly with the report of Dr Parson these valid concerns will be addressed after analysis of the reports by Dr Riemann to avoid duplication

134. What is important now is the fact that Dr Marinelli was given specific questions by the Appellant and it is important to evaluate his response to those questions. The questions were:-

135. [1] *“How significant are the risks of contamination or alteration of the chemistry of the Elandsfontein Aquifer groundwater, and is this adequately addressed by EEM in its WUL”.*
136. Dr Marinelli’s response was that he is not a geochemist. I will therefore not consider his answer any further.
137. “[2] Are there sufficient safeguards against the aquitard being pierced, and what are these safeguards?
138. The scientific dictionary meaning of an aquitard is that *“An aquitard is a poorly permeable underground layer that limits the flow of groundwater from one aquifer to another”*. I have assumed that it is the same membrane which is described as a clay layer by some of the reviewing experts.
139. The concern of the Appellant which concern I accept is valid was that piercing of the aquitard would mean that contaminated water from the Upper Aquifer (the mining took place in its vicinity) would flow to the Lower Aquifer. That would also change the directional flow of water to the Lagoon, potentially affecting the water balance in the Lagoon and by implication the relevant dependant ecosystem.
140. Dr Marinelli’s report was that he did not expect the aquitard to be pierced, such an eventuality being a nightmare for the mine itself, which nightmare it (the mine) would obviously want to avoid.
141. [3] *To what extent will there be a permanent decline in the level of the water table post rehabilitation of the mine?*

142. Regrettably Dr Marinelli did not answer this question properly and or accurately. His answer was that *“the drawdown effects of mining will persist long after mining has ended. See the attached scoping calculations to get a general idea of how aquifer water levels will be affected by dewatering/recharge.”*
143. My understanding is that recharge is to offset the effects of dewatering. From Dr Marinelli’s answer this interplay does not appear to be assumed. Further, the question of what the water level will be remains unanswered. Must one assume that the drawn down means that water levels around the pit will go down, and if the answer is in the positive what negative impacts flow therefrom. Dr Marinelli does not say.
144. [4] *Has a proper hydrocensus been done (5 kilometre radius)?*
- From my reading of available literature groundwater hydrocensus is a process of documenting all the groundwater sites within a particular area. Groundwater sites refer to boreholes, natural springs where groundwater daylights and well points.
145. Dr Marinelli in his response excluded natural springs and discounted the hydrocensus as a major issue where wells (boreholes) are concerned. For him the major issue would be how the mining operation would affect the future availability of groundwater in the event that land owners want to develop water out of the Upper Aquifer.
146. Dr Marinelli was not called in to explain his report. In the circumstances we could not ask him whether in terms of a full hydrocensus there were no springs

fed by the upper aquifer that could be used by the landowners as alternative sources of water.

147. *[5] To what extent are the tests that were performed adequate, appropriate and complete to make a decision to grant the Water Use Licence?*

148. I must state from the onset that this question is designed to carry significance in review proceedings rather than in this wide appeal where the Tribunal is at liberty to call for additional information rather than question the basis and reasonableness of the decision maker's decision. Ergo, we as the Water Tribunal are in a position to evaluate sufficiency of information for granting or refusal of the Water Use Licence.

149. However Dr Marinelli's answer is highly relevant to the Appellant's position because it negates it. Contrary to the constant tone of the Appellant, to wit, that more research ought to have been done before the award of the Water Use Licence, the so called knowledge gaps, Dr Marinelli states categorically that *"It is a cardinal rule that there is never enough testing data to fully characterise the aquifer conditions..."*

150. *[6] Can we make any assumptions that there will be no risk to the Lagoon from the information?*

151. In answer Dr Marinelli opines that in his opinion the risk to the Lagoon is very low. Again this answer is extremely significant because it dispels the cry of the Appellant that the Lagoon is a RAMSAR site that is threatened by the granted Water Use Licence.

152. Once more an experts report relied on by the Appellant does not make the conclusion that the iWUL ought not be granted.

153. I now turn to the report of Christine Colvin titled *Colvin – Hydrogeological considerations in objection to EEM's iWULA for groundwater abstraction and artificial recharge into the Elandsfontein Aquifer (the Colvin Report)*²⁹

154. The Colvin report was like the other expert reports of Dr Parson and Marinelli aimed at the iWULA. Consequently it does not take into account the licence conditions that were imposed when the WULA was granted. In that sense it is incomplete as an evaluation tool for purposes of this judgment.

155. The Colvin report makes the following observations in respect of the aquifer pertinent to the judgment.

- *The EEM mine is situated in an area where rainfall is extremely limited, it being a mere 260 mm per annum. (I assume that this is an average figure because rainfall varies from year to year). Because of the scarcity of rain groundwater is the most important source of water. This groundwater is not rechargeable every year and much of it is fossil water with a calculated age of 20 000 years. This means that once this groundwater is removed it could take centuries to thousands of years to recharge and recover depending on future rainfall.*
- *The scale of groundwater abstraction proposed by the mine is in order of magnitude greater than anything previously experienced in the area. In year 1 the mine proposed abstracting and injecting 11 million cubic metres.*

²⁹ Annexure P, page 214 Appeal Record

Prior to 2008 the West Coast District Municipality abstracted 1.46 million cubic metres from the lower aquifer, 10 km to the North East of the mine site. This resulted in a 10 m drop in the water level around the well field and the monitoring committee, (including DWS) (own underlining) lowered the abstraction rate by 10% to prevent further declines in groundwater levels (DWS 2010). Colvin does not say what the mitigation measure was because for Third Respondent the mitigation measure is reinjection.

- *The aquifer could take decades to recover if abstraction happens without reinjection successfully implemented (sic) (own underlining).*

156. I accept the validity of the concerns raised in the Colvin report, I however note the following:-

157. The report accepts the efficacy of monitoring as a control tool because when abstraction by the West Coast District Municipality led to a drop in water levels the monitoring committee, including DWS lowered the abstraction rates. The granted WUL also has a monitoring committee.

158. Condition 18 Licence Conditions provides as follows:-

“The licence must within two (2) months from the date of the issuance of this Licence, establish a Monitoring Committee to oversee the implementation of the monitoring programme, assess the effectiveness of applied monitoring to protect the water resources and make recommendations to improve the monitoring for the reconsideration and approval of the Responsible Authority. The Monitoring Committee shall include the representatives of the following organisations and groups...”

159. *I will not list herein all the organisations and groups mentioned in Licence condition 18, suffice to state that WCEPA, the Appellant, SANParks, Department of Environmental Affairs, Cape Nature, Saldahna Bay Municipality, West Coast District Municipality and Local Farmers are some of the mentioned I&AP's that form part of the monitoring committee. In the circumstances Appellant will be able to intervene or enable intervention, should the water level fall below recommended thresholds.*
160. It is common cause in the appeal papers that abstracted water will be reinjected, and the Colvin report by implication accepts that if reinjection is successful that will be adequate mitigation.
161. Thus far I do not read the Colvin report as recommending refusal of the Water Use Licence.
162. The Colvin report however goes further and deals with what it terms "*Limits of our current knowledge on this critical resource and the potential impact of EEM.*"
163. Under this heading the following is stated "*A numeral groundwater model has been set up to assess the impacts of mine dewatering and artificial recharge. The numerical model for the mine site and surrounding area SRK, 2016- as with all numerical models is based on limited field real data and hydrogeology of the area. All models have predictive limitations about the geology and hydrogeology of the area. All models have predictive limitations, determined by the data used in the set up and calibration. This means that it can be used to design a site- level*

dewatering programme, but cannot be used to confidently predict surface – groundwater interactions.”

164. In evaluating the above statement one needs to take into account that the Colvin report was drafted in 2017. However at the time the Appeal was heard the Third Respondent, EEM had been dewatering and reinjecting for a period of approximately 4,5 (four and half years). Due to continuing data collection and adaptive management explained by the experts of Third Respondent there was in the meantime upscaling of available data and capability of the evolving numerical models. The licence condition stipulate that models must be updated continuously.
165. In my evaluation Third Respondent’s Heads of Argument, citing and summarising the report of Dr Nel dated September 2019 (it must be noted that this is not the same report cited previously and commissioned by SANParks , the report relied on by the Appellant) answer Colvin’s concerns about limits to our current knowledge.
166. Firstly according to Third Respondent because of his work for SANParks (the report I have already analysed in this judgment) and because of his reputation and standing Dr Nel was mandated by Third Respondent as the hydrogeologist required by the site specific conditions of the WUL (in Appendix vii), to further develop the necessary numerical models (quantity and geochemical) used to inform adaptive management decisions, and to support the aquifer management and wellfield operation.³⁰

³⁰ Paragraph 23, page 10, Third Respondent’s Heads of Argument.

167. The summary in the Third Respondent's Heads of Argument is as follows:-

"As set out in the Nel September Report, extensive data collection, sampling and monitoring undertaken to date after Kropz (Third Respondent) commenced the dewatering of the mine pit and the artificial recharge during February 2017, pursuant to the authorisation of 22 December 2016, demonstrates the following:³¹

- *Monitoring data has improved the understanding and predictions of the mine influence and any likely risk to the lagoon.*

168. The Colvin report proceeds to set out 9 concerns which it calls "*untested parameters in the groundwater conditions which could significantly impact on the viability of the mine (Third Respondent) to abstract and reinject groundwater into the aquifer, without impacting groundwater dependent ecosystems.*"

Further, Colvin opines as follows:-

"Even if artificial recharge by reinjection is successful, we are not confident whether it will result in increase or decrease in the groundwater gradient flow towards the lagoon. These would happen over time scales of 100 years which have not yet been assessed in the existing numerical models"

169. In evaluating the above two paragraphs of the Colvin report I commence by first noting that at the time of its drafting, the final report of Dr Nel (September 2019) had not yet been done, the numerical models had not yet been upscaled applying inter alia adaptive management and newly sourced data.

170. Secondly the Colvin Report was in March 2017. The Appeal was argued four and half years later. Consequently, the uncertainties surrounding abstraction

³¹ Paragraph 25 page 11, Third Respondent's Heads of Argument.

and artificial reinjection had for a considerable time operationalized in real field operations. For example, in one of Colvin's nine parameters the following concern is stated "*the variation in storativity in the upper aquifer and its ability to assimilate the very large (11 million cubic metres per annum) injected volumes of water*".

171. Further, Colvin in her report had stated that "*the longest and most successful injected Artificial Recharge (AR) site in South Africa is into the Windhoek Aquifer (Namibia) ... with a long history of abstraction and therefore available storage in the cone of depression. This does not exist in the Elandsfontein Aquifer system and the water table is relatively shallow at approximately 20 mbg.*"

172. In my mind the implication is that abstraction over an extended period eventually creates room to house bigger volumes of reinjected water. Ergo, the same room has been created by the four and half years of abstraction at Elandsfontein.

173. Furthermore, it seems that only Colvin felt that storativity is an issue. I did not find a similar concern in the expert reports of the other scientists. More poignantly, Dr Marinelli who also read the Colvin report expressed a different view when he stated as follows "*The issue is not the ability of the aquifer to accept recharge, but rather the ability of wells to maintain recharge capacity over time*".³²

174. The other concern of Colvin in her "*untested parameters*" is the possibility of chemical contamination of groundwater. According to her the impact of dramatically increasing flow rates in the abstraction/reinjection zone may mean

³² Paragraph Dr Marinelli report page257 Appeal Record

rapid pumping through the ore body and the upper aquifer, a situation that could mobilise higher levels of phosphate into the abstracted groundwater.

175. In this regard condition 4 of the Licence Conditions provides as follows:-

“No polluted water is to be injected during the artificial recharge process. The water must be returned to the resource in such a state that there are no impacts on the groundwater quality and no hydrochemical change (1) km down hydraulic gradient of the site at any stage in the future.”

176. Further it is one of the licensing conditions that monitoring of groundwater quality must continue post mine closure.

177. The Colvin report also raises what it calls *“Deviation from artificial recharge best practice required by DWS”* According to Colvin DWS has published guidelines on the implementation of artificial recharge. The said guidelines allegedly indicate the necessity of a testing phase of all new AR (artificial recharge) sites and recommend issuing of short term licences during the testing stage.

178. It is common cause that there was a Pumping Test and Recharge Study by the mine circa 20 February 2016. The Colvin report does not mention this study nor does it state what the effect or meaning of the alleged deviation from best practices is.

179. In my view although this may well be valid criticism of a process that was not properly followed in the road leading to the award of the WUL, such however has no bearing on the question at hand, because like many other questionable or

risky practices of Third Respondent the execution of operations, in casu successful artificial recharge render this criticism obsolete.

180. According to the Nel September 2019 report (the same report cited above as summarised in Third Respondent's Heads of Argument) *"the recharge boreholes have turned out to have very high efficiencies, capable of taking all the water recharged into the aquifer to date"*

181. Ms Colvin in her report, also addresses what she calls irregularities and omissions in the iWULA. I do not deem it necessary to analyse this aspect because as stated previously, work, monitoring and improvement on the models continued after the iWULA and post granting of the WUL in the form of Dr Nel's further work on behalf of Third Respondent. Also the WUL imposed conditions to counter adverse impacts. For any criticism to be valid at this appeal stage it must take into account those later developments.

182. I now turn to the concluding remarks and recommendations of the Colvin report. For purposes of making them relevant to this appeal. I will group or pair them.

183. On abstraction of high volumes of groundwater, Colvin states the following:-

- *Groundwater in the proposed mining area has high value as it is the most extensive water resource for commercial and ecological uses.*
- *Given the importance of the local groundwater resources for all uses in the region – agricultural, environment, municipal and international importance as a RAMSAR site, the Precautionary principle should be enforced.*

184. Dr Nel in his report for SANParks (October 2016) also highlighted the importance of groundwater within the mine area. He states that *“the Elandsfontein paleo valley is included in the Lower Berg River Valley/Saldanha Subterranean Government Water Control Area (SGWCA). As a result of the SGWCA declaration, all new groundwater use (after 10 September 1976) had to go through a licence application under the old water act (Act 54 of 1956). The new water act (Act 36 of 1998) placed similar licence requirements on the aquifer system, with the old SGWCA area receiving a Zero general authorization”*.
185. Further, he states that the aquifer was recommended as a *“Special Aquifer System”* in accordance with *“South African Aquifer System Management Classification”*, and should require a *“High to strictly non degradation level of groundwater protection.”*³³
186. Most important for SANParks, the entity for which the above cited report of Dr Nel was undertaken, groundwater from the Elandsfontein Aquifer is the main source of freshwater to the estuarine and fresh water ecosystems near Geelbek in the Langebaan Lagoon forming part of the West Coast National Park protected areas.
187. SANParks therefore had a vested interest on the WUL. Dr Nel however stopped short of advising SANParks to argue for refusal of the WUL. At the time of hearing of this appeal SANParks was one of the organisations actively participating in the monitoring of the Third Respondent’s activities in terms of the licence conditions.

³³ GCS (Dr Nel), Review of hydrogeological impact of the proposed Elandsfontein Phosphate Mine adj_____ to the West Coast National Park Annexure L, Appeal Record page 145.

188. In stating that the Precautionary Principle should be enforced the Colvin report did not expand on what that meant for the proposed water use licence.
189. In terms of NEMA the Precautionary Principle means that:
“2(4)(a)(vii) a risk averse and cautious approach is applied, which takes into account the limit of current knowledge about the consequences of decisions and actions, and 2 (4)(a) viii that negative impacts on the environment and on people’s environmental rights be anticipated and prevented and where they cannot be altogether prevented, are minimised and remedied (own underlining)
190. Appellant in its Heads of Argument submits that *“in the analysis of individual impacts.... it is demonstrated that the licenced water pose threats of serious or irreversible environmental damage. To the extent that there was scientific uncertainty regarding resulting environmental damage, the precautionary principle required the Chief Director to refuse the mining right application (sic) in circumstances where adaptive management was neither appropriate nor effective”*.³⁴
191. Firstly, the Precautionary Principle in my understanding does not state that there should be no development. I have underlined in the paragraph above on the Precautionary Principle words that indicate that the Precautionary Principle accepts that development, though posing a risk to environment is a necessary evil. Those words are *“cautious approach”* and *“where (negative impacts) cannot be altogether prevented, are minimised and remedied”*.

³⁴ Paragraph 33 page 14 Applicants Heads of Argument

192. It would seem that Colvin herself, though mentioning the Precautionary Principle does not view its application in the specific circumstances of Third Respondent's Water Use licence as indicative of a need to refuse the Water Use Licence because she concludes by stating the following:-

"Adaptive management protocols need to be clearly defined to ensure timeous halts to operations if dewatering or reinjection fails and results in groundwater levels or chemistry reaching thresholds of concerns"

193. I need to remark that contrary to Appellants' contention in its Heads of Argument that adaptive management was neither appropriate nor effective in the WUL of Third Respondent, its expert Colvin did not hold the same view. In that respect I regret to say that Appellant's assertion in its Heads of Argument and grounds of appeal are in this respect not supported by its own expert.

194. Third Respondent in its Heads of Argument submit as follows in respect of adaptive management.

"Adaptive management and the terms of the WUL

The WUL wasgranted subject to a wide range of conditions. These conditions serve to establish a comprehensive testing and monitoring regime and to enable the use, management and control of the water resource to be dealt with in a flexible, adaptive manner, as further and better information becomes available over time..." It recognises that when granting authorisation for a substantial mining operation, it is impossible to cater in advance for all contingences. To

*attempt to do so would be a counsel of perfection which would unreasonably impede socio economic development.*³⁵

195. The last of the experts relied on by the Appellant is Dr Komelius Riemann whose expert reports were done under the auspices of an entity called Umvoto. Dr Riemann was incidentally the only expert who attended the appeal hearing, as such he was cross examined extensively by Counsel for the Third Respondent.

196. There are 3 Umvoto reports. This first is Annexure M to the Appeal record. It is dated 28th April 2017. In it Dr Riemann was appointed by Friends of West Coast Ecology and Biodiversity (FOWCEB) “*to undertake a water balance of the Elandsfontein Exploration and Mining (EEM) Site and a review of the Water Use Application WULA*”³⁶ The WULA was granted on the 7th April 2017. In the circumstances this report could deal with the WUL and its conditions for a comprehensive analysis.

197. The agreed scope of work for the report had the following objectives:-

“[1] Assessment of the water requirements of EEM for both dewatering of the excavation pits and process water in the mine footprint as provided in the iWULA and other reports.”

198. The above scope was wrongly formulated because the experts and license conditions already in existence before this Riemann report indicated that dewatering would be mitigated by reinjection. It was therefore incorrect to put forward an objective that does not deal fully with the physical condition to be assessed.

³⁵ Paragraph 81 and 82, page 32 Appellant’s Heads of Argument

³⁶ Annexure M, Umvoto Report, page 176, Appeal Record

“[2] Review of the iWULA (mainly utilising Roger Parsons review) and proposed licence conditions to determine how the conditions will match the water requirements set by the mine and whether they are sufficient to protect the water resources.”

199. Notwithstanding the licence conditions being in the scope the report of Dr Riemann did not deal with them, stating as follows:-

“LICENCE CONDITIONS

*Since the reviews of the iWULA by ERM, GCS, Parsons, Colvin and Marrinelli, the integrated water licence has been awarded, apparently with conditions attached, which are currently unknown. It is expected that some of these conditions would stipulate a phased approach for implementation of full scale dewatering and infiltration with a testing phase of several months, especially with respect to the capacity of the aquifer to receive the abstracted water via the infiltration boreholes. This is crucial and needs to be monitored closely, as the estimates of infiltration capacity are based on the horizontal infiltration tests”.*³⁷

200. One would have expected Dr Riemann to comment on the manner in which the dewatering and artificial reinjection were playing out and if the mitigation measures were successful or not. He however did not do so.

201. Dr Riemann was the only witness who was called by the Appellant to testify. He therefore testified as an expert and as a factual witness. It is important to note that although in this report he was apparently instructed by an entity known as

³⁷ Annexure M, Umvoto dated 28 April 2017 page 185, Appeal record

FOWCEB he has been part of monitoring under the auspices of the Appellant, WECPA.

202. At no stage in his expert testimony or for that matter as a factual witness involved in the monitoring committee established to ensure compliance by Third Respondent, with the licence conditions, did Dr Riemann place evidence and or complain about incapacity of the aquifer to receive the artificially infiltrated water, nor did Dr Riemann complain about the inefficiency of the artificial recharge boreholes since the exchange of the horizontal infiltration in the licence proposals to vertical infiltration at the operational stage of the licence .

203. It is also important to refer back to the Heads of Argument of the Third Respondent that correctly state as follows:-

204. In summary, the Nel September 2019 report (as confirmed by him in his evidence) concluded as follows:

- *Dewatering impact: the dewatering impact is successfully mitigated by artificial recharge.*
- *Artificial recharge: the artificial recharge is efficient and water levels increased by about 3 m in the monitoring holes near the recharge boreholes. This is still significantly below the surface elevations and there is no risk of temporary wetlands forming. The artificial recharge could, however, cause a potential risk of increased water levels and flow to the lagoon. Should this be an environmental concern, an alternative recharge distribution and a reduction in recharge volumes would be considered”.*³⁸

³⁸ Third Respondent’s Heads of Argument, paragraph 218, page 77

205. Lastly, this concern was in any event not pursued in Appellant's Heads of Argument because under artificial recharge Appellant did not deal with the capacity of the aquifer to receive recharge and or efficiency of recharge boreholes but instead dealt with a different issue, an increasing trend in electrical conductivity("EC")³⁹

206. By way of completeness it is important to also state that in the circumstances Appellant in its Heads of Argument abandoned not only Dr Riemann's concerns but also Colvin's concerns about success of artificial recharge.

207. It is therefore clear that Dr Riemann did not analyze the licence conditions at all in this report which summarises his findings as follows:-

- *It is not possible to provide an accurate water balance for different flows on the mine due to conflicting information and lacking information.*

208. Reduced to basics the concern here is that the mine will consume excessive amounts of water and lead to water shortage. Elsewhere in his report under the heading "Regional Context of Water Supply" Dr Riemann demonstrates conclusively, I must say, that already, (without the volumes of water to be consumed by the mine the area is water stressed. He further indicates that the West Coast District and Saldanha Bay Municipalities have exceeded their allocation from the Berg river and did not have additional water to supply the mine.

209. I accept that the area is a water scarce area. I however as a member of the Water Tribunal have no authority on Municipal water (i.e. portable water). If the

³⁹ Paragraph G (107) PAGE 36, Appellant's Heads of Argument

municipality is of the view that it can supply the water to the mine that is its prerogative.

210. Further, as Third Respondent points out in its Heads of Argument⁴⁰ the situation of water scarcity may be improved by the closure of Arcelor Metal (Saldanha Steel) in 2019. Its witness Ms Lawrence testified that Arcelor Metal had about 2000 permanent employees and contractors consuming over 7 megalitres of water per day.

211. I have also taken into account that Dr Riemann's assessment does not take into account the mitigating factor to water abstraction, to wit artificial recharge.

212. Lastly, Appendix vii of the approved WUL imposed the following site specific condition in respect of Modelling. (I understand modelling herein to refer to scientific forecasting of future scenarios concerning water use impacts).

“(1.1) The licensee must ensure that numerical models (quantity and geochemical) are developed and used to support aquifer management and wellfied operation. The model will be used to inform adaptive management decisions such as amendments to abstraction rates or points for optimal groundwater use and management of potential impact on other water users, the environment, especially the wetlands, Langebaan Lagoon, Gren River, Sout River, Langebaan Road and Elandsfontein Aquifer.”

213. Most importantly the model will be supported by data including Water balance (own underlining)

⁴⁰ Paragraph 270, pages 94 and 95 Third Respondent's Heads of Argument.

214. Dr Riemann's summary also has the following conclusions which have a bearing on water availability in the area of the mine.

- The Saldanha Bay municipality does not have water available for supplying to the mine as process water. My comments above cover this concerns.

215. The last relevant summary conclusion is that monitoring data indicates a steep decline in water levels in the surrounds of the mine since August 2016.

216. Firstly I do not see this conclusion as being related to granting of the Water Use Licence because of the following:-

- (i) The water use licence was granted on the 7th April 2017. I therefore cannot link its granting to the decline in water levels around the mine.
- (ii) Secondly, even if the decline in ground water level in the immediate vicinity of the mine was as a result of mining activity, that does not seem to be the crux of the issue for the Appellant. Appellant's concern is the possible risk to the Langebaan Lagoon which (and this is common cause) is important not only for local ecology but is also a RAMSAR site i.e. an internationally recognized wetland habitat. The area immediately surrounding the mine is not a RAMSAR site. It is the Langebaan Lagoon that is a RAMSAR site.
- (iii) Dr Fred Marinelli has been quoted before in this judgment as stating that *"Overall it is my opinion that the risk to the Lagoon is fairly low"*. Dr Nel reached the same conclusion in his 2019 Report.

217. Finding no concrete scientific reason to say that the licence ought to have been refused Dr Riemann concludes as follows:-

“We suggest that these concerns and possible flaws are discussed with the legal team to determine whether there is sufficient ground to appeal the license”

218. The next report of Umvoto (Dr Riemann) is dated 16 May 2017. Again FOWCEB was the instructing client, and the aim was to review the WUL and its licence conditions. This report is Annexure N to the Appeal Record.⁴¹

219. According to Dr Riemann the following reports were not included in his review documents (I have already commented previously on the duty of the attorneys to properly brief the experts with all documents)

- *Groundwater Management Plan*
- *Groundwater Monitoring Plan.*
- *Approved EMPR*
- *Mine Design*

220. The essence of Appellant’s objection to the WULA is that same would interfere with the levels of groundwater available. Consequently, any meaningful and serious analysis ought to have insisted on the inclusion of documentation that talk directly to groundwater. That, that was not done has a negative impact on the value of this second Riemann critique of the WUL

221. The report then proceeds to analyze the approved activities under WUL. It thereafter does an analysis between the iWULA and WUL. Both these analyses are of course irrelevant to this judgment because the Water Tribunal is not called upon to review the granting of the WUL therefore discrepancies and or shortcomings between the iWULA and WUL are irrelevant.

⁴¹ Page 195, Appeal Record

222. Important for this judgment is Dr Riemann's analysis of the Licence Conditions. I therefore turn to evaluate same. I do so seriatim the report itself.

223. *General Conditions*--- Dr Riemann notes his satisfaction with same. Notably he approves of the general condition that ensures the independence and impartiality of the external auditor.⁴²

224. *Establishment of the Monitoring Committee*---Dr Riemann states as follows about the Monitoring Committee.

"In our experience, the Monitoring Committee is an important albeit informal institution that can act as the "watchdog" with respect to the licence conditions and can influence the operation if there is not strict adherence to the licence conditions. The fact that WCEPA is part of the monitoring committee is important as all monitoring and audit results are made available to the Monitoring Committee for review. This facilitates access to all relevant information (own underlinings).

225. Dr Riemann then refers to Licence Conditions 19 and 20 and comments on them as follows:-

"These two clauses stipulate that mining must be put on hold, if negative impacts are detected, to allow for an investigation. If the findings indicate non-compliance with the license conditions and or detrimental impacts on existing lawful users or the environment, corrective measures must be put in place."

⁴² Annexure N, Umvoto Repot, page 202, Appeal Record

226. Concerning licence conditions dealing with abstracting water from the pit Dr Riemann notes that the most relevant clause thereof is clause 3 which reads as follows:-

“[3] The volume of pit water must be limited to a volume that will not negatively impact on lawful users of the aquifer or aquifer dependent ecosystem. The remainder of the water taken from the pit must be treated as necessary and recharged into the aquifer”

227. Dr Riemann’s comment on this clause 3 is that *(i) this licence condition is probably not enforceable, as it would be difficult to distinguish between impacts of the consumptive use and the abstraction/ reinjection of water (ii) Furthermore, the conditions under section 21 (e) do not allow for easy increasing of the volume of water to reinject* (the Roman figure numberings are my own insertion).

228. I fail to comprehend this criticism. Concerning what I have numbered (i) I am at a loss why Dr Riemann mixes abstraction volumes with impacts. In my reading of the expert evidence these are two different things. Concerning Roman figure (ii) I do not see why in interpreting clause 3 he envisages increasing of reinjection volumes. Pursuant to my stated queries and or reservations I attach no value to this criticism.

229. Dr Riemann also raises a concern about the WUL authorising the impeding, diverting of two water courses and altering of these two water courses. According to him the co-ordinates given do not make clear which non perennial water courses are meant.

230. Personally I understand why there might be difficulties with co-ordinates for non-perennial rivers. These rivers are rivers without a constant flow. They are also described as ephemeral and episodic. It must be somewhat difficult to plot a dry ill-defined river. From my understanding of the ephemeral nature of non-perennial rivers I believe that once they come into being i.e. water flows, the monitoring committee will be able to incorporate them into the monitoring system and the reporting that needs to be done will be done.

231. Although Dr Riemann goes on to list and analyse various other licence conditions he does not criticise them for lack of efficiency or suggest that they should be strengthened.

232. Most significantly in his conclusive summary Dr Riemann says nothing about the licensing conditions. What he states is the following:-

- *The iWULA did not include the non-perennial rivers mentioned in the WUL.*
- *The iWULA and WUL differed in authorisations and water uses.*
- *It appeared that Third Respondent commenced certain activities prior to getting authorisation.⁴³*

233. The penultimate Umvoto report is dated 23 June 2017, and the stated purpose is:-*"FOWCEB has requested an additional review of the Record of Recommendations (ROR) in comparison to the iWULA and WUL reviews undertaken (sic) earlier"*

234. I must say that this is not an exhaustive review. It has only 3 pages. According to Dr Riemann, the main discrepancy between the WUL and ROR

⁴³ Summary: Umvoto report Annexure N, page 210 Appeal Record.

relates to the licence conditions as not all licence conditions that were recommended by the DWS Geohydrological Unit are included in the WUL or not in the same form. I must say I find the latter part of Riemann's observation unnecessarily pedantic and of not much use as an evaluation tool. Why must the licence conditions be in the same format. Are we not looking at the essence of issues herein.

235. To be frank, my biggest difficulty with the whole case of the Appellant is that there seem to be no genuine effort to properly identify issues that militate against granting of the WUL. Instead there are disjointed, scattered, isolated and largely theoretical attacks on the WUL without presenting accessible and practical criticism. In contradistinction to the approach of the Appellant is the sensible and practical approach of SANParks. The latter commissioned an in depth research on impacts.

236. Here are Dr Riemann's findings on the ROR review.

- The role and function of the Monitoring Committee has been significantly reduced in its ability to oversee and guide the monitoring and compliance with licence conditions; see changes in recommended conditions 8,14,13 and 32 as well as leaving out recommended conditions 9 and 59.

237. Condition 18 of the Licence provides as follows:-

"The licensee must, within two (2) months from the date of issuance of the Licence establish a Monitoring Committee to oversee the implementation of the Monitoring programmes, assess the effectiveness of applied monitoring to protect the water resource and make recommendations to improve the monitoring for the

consideration and approval of the Responsible Authority. The Monitoring Committee shall include representative of the following organisational group....”

(there follows a list of 13 diverse I & APS, Appellant being one of them.

238. For me the above enabling condition is sweeping and comprehensive enough for meaningful stakeholder involvement and engagement.

239. In any event in the various minutes of Meetings of the Monitoring Committee (pages 574 up to 593 Appeal Record) there is mention of WCEPA (Appellant) and Dr Riemann as attendees in some of the meetings. Not once do they raise the issue of the Monitoring Committee being a toothless dog.

240. Dr Riemann proceeds to set out those conditions which were left out in the final WUL. Same are given in random order without any attempt to locate them into analysable categories e.g. anti-pollution or groundwater level.

241. I now look at whether the omitted conditions are not covered by other conditions existing in the Licence.

242. Removed Condition 70 – monitoring to detect pollution from soft stockpile:-

- Appendix V of the Licence Conditions deals within the specific conditions addressing impacts associated with Section 21 (g) of the Act:- Disposing of waste in a manner which may detrimentally impact on a water resource.

It has this paragraph/ provision:-

“Preventative action must be provided to ensure that there is no groundwater pollution beneath the soft stockpiles. Monitoring is to be put in place to detect any such pollution.”⁴⁴

⁴⁴ Paragraph 123.5.1 Respondent’s Response to the Appeal page 403. Appeal Record.

243. Removed Condition 54--Arsenic mobility and adsorption. Arsenic is one of the elements and the licensing conditions have over seven separate clauses dealing with possible contamination of water by chemical elements.⁴⁵
244. Removed Condition 28- Updated hydro-census: From a scientific dictionary definition a hydrocensus survey entails gathering of water use, quality and quantity within the study area. This technical assessment approach has been formulated to assist in the collection of baseline information regarding the groundwater states of the study area. There are sufficient conditions in the licence covering groundwater quality and quantity.
245. Aquifer testing – Essentially this condition deals with storativity of the aquifer. Previously in this judgment I noted that only Colvin saw this as an issue and Dr Marinelli stated categorically that, for him it was not an issue. In any event the Appellant has been abstracting and reinjecting water for four and a half years as at the time of the appeal and no problems on aquifer storativity manifested themselves.
246. Removed Condition 25—this condition dealt with with monitoring and independent evaluation and verification.
- Clause 18 of the licence condition introduces stakeholder involvement in monitoring. I accept that stakeholders like SANParks have both the know how and financial muscle to act as independent evaluators.
247. Removed Condition 13 — This condition deals with evaluation of data and maintenance of the condition of the Department's monitoring boreholes. The area

⁴⁵ Paragraph 123.1.13 et.seq Ibid page 413 Appeal Record.

of this condition is amply covered by Condition 1.1 Appendix vii in respect of modelling. Third Respondent sets out the condition in full in its Responding Statement to WCEPA Appeal⁴⁶

248. Removed Condition 12—This condition provided for evaluation of potential impact areas around the site before mining below the water table takes place to assist in the identification of suitable network and to collect baseline data should any long term changes in the system occur. This condition is covered by condition 2.1. Groundwater Monitoring Plan which condition provides for establishment of a monitoring network to determine the impacts, geohydrological changes, deterioration and improvement of the environment associated with the activities. The full condition appears in Third Respondent's Response to the Appeal.⁴⁷

249. Removed Condition 7--This Condition calls for the licensee to fund and establish an independent and comprehensive assessment of the impact of mining on the regional aquifer prior to the first licence review. In my opinion this condition has been subsumed in the myriad of licensing conditions dealing with monitoring and is also rendered somewhat not applicable by the adoption of Adaptive management principle where impacts are read along as the Third Respondent executes its operations.

250. It is regrettable that Dr Riemann did not deem it necessary to explain in his report why the allegedly omitted conditions were important. His report is deficient in that regard. (I must say it was also an omission on my part not to request him to furnish this information)

⁴⁶ Responding Statement to the Appeal, par 123.7 etc seq PAGE 406 Appeal Record.

⁴⁷ Ibid PARAGRAPH 123.8 et seq page 409 Appeal record.

251. In conclusion Dr Riemann states as follows *“even if all recommended conditions had been included in the WUL, the assessment in ROR falls short, as is clearly states (sic) in part 2.9 impacts of Activities on water resources and mitigation measures that several possible impacts have not been adequately addressed.... The adequacy of a still to be developed response plan was not assessed.*
252. My understanding is that Dr Riemann’s key complaint is that not all impacts were adequately addressed. Indeed he takes up this issue as the focal point of his attack on the WUL in his expert opinion update of the 25/27 November 2019. Where he submits that “The water use licence should have been based on a risk based impact assessment of the different activities that constitute a water use. As shown in detail below, several potential risks have not been considered or not assessed properly during the iWULA process. Even with the addition of the now available monitoring data, the impact assessment is not complete.
253. This expert report of Dr Riemann was in response to a directive by the Chairperson of the Water Tribunal for WCEPA (Appellant) to furnish Third Respondent with an expert witness’ report during the hearing. Third Respondent would then respond to same.
254. The aim of the Directive was to ensure that scientific evidence for and against the WUL is crystallised.
255. Because I have in this judgment excussed in detail the various expert reports including all reports of Dr Riemann I do not deem it necessary or worthwhile to again traverse Dr Riemann’s November 2019 report. Suffice to state

that the criticism of Dr Riemann is successfully met and dealt with by the following statement which is a response of the experts of the Third Respondent to his updated expert opinion called for by the Chairperson.

[13] According to Dr Botha

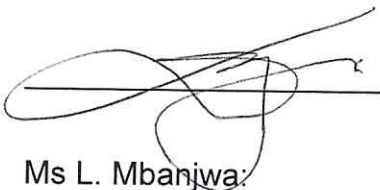
Feasibility studies (including impact assessments) of potential mitigation measures are a continuous process as new monitoring data becomes available. The understanding of the system evolves and possible impacts and potential mitigation measures will change. New potential impacts and mitigation measures will form part of the overall management plan. This is typically experienced within the mining sector because the ore deposits are almost never homogenous and adaptive management is entrenched in the mining sector.⁴⁸

256. I have chosen not to deal with 2 aspects which were raised by the Appellant to wit alleged bias on the part of the officials of the Department of Water and Sanitation in granting the Water Use Licence and also the testimony of Mr Dreyer, the departmental official who compiled the record of recommendations for granting of Water Use Licence. It is my considered view that the issue of bias is not relevant in these proceedings and the actions of Mr Dreyer are also not relevant. The matter turned purely on the question of whether the Water Use Licence ought to have been granted on not based on provisions of the National Water Act and scientific evidence.

257. I am satisfied that that Appellant has not successfully demonstrated the following key aspects.

⁴⁸ Paragraph 13, Third Respondent's Answers to the Appellant's updated Expert Opinion, Dated 25th November 2019

- (i) That the precautionary principle ought to have been followed and the WUL refused.
- (ii) That adaptive management is not the correct approach in the specific circumstances of this matter.
- (iii) That the execution of the water use licence has led to negative impacts on the Langebaan Aquifer and the Lagoon that is a RAMSAR site.
- (iv) That there is a real possibility amounting to almost a probability that certain specific and demonstrable negative impacts will manifest during execution of the water use licence.
- (v) That the mitigation measures mentioned in the 2019 Nel report as well as licence conditions will not be effective.
- (vi) That the licence conditions in the WUL are inadequate.
- (vii) I therefore make the following order:-
 1. The appeal is dismissed, and there is no need to add further conditions on the Water Use Licence. Neither is there a need to add the conditions recommended by other units within the Department of Water and Sanitation, which conditions were omitted from the granted Water Use Licence.



Ms L. Mbanjwa:

(Water Tribunal Member)

