

**MPUMALANGA DEPARTMENT OF AGRICULTURE, RURAL
DEVELOPMENT, LAND AND ENVIRONMENTAL AFFAIRS**

Appeal instituted by:

EARTHLIFE AFRICA JOHANNESBURG	FIRST APPELLANT
BIRDLIFE SOUTH AFRICA	SECOND APPELLANT
MINING AND ENVIRONMENTAL JUSTICE NETWORK OF SOUTH AFRICA	THIRD APPELLANT
ENDANGERED WILDLIFE TRUST	FOURTH APPELLANT
FEDERATION FOR A SUSTAINABLE ENVIRONMENT	FIFTH APPELLANT
GROUNDWORK	SIXTH APPELLANT
ASSOCIATION FOR WATER AND RURAL DEVELOPMENT	SEVENTH APPELLANT
BENCH MARKS FOUNDATION	EIGHTH APPELLANT

Directed to:

**MEMBER OF THE EXECUTIVE COUNCIL: AGRICULTURE, RURAL
DEVELOPMENT, LAND AND ENVIRONMENTAL AFFAIRS,
MPUMALANGA**

Copied to:

MINISTER OF ENVIRONMENTAL AFFAIRS

**APPELLANTS' STATEMENT OF GROUNDS OF APPEAL IN TERMS OF
SECTION 43(2) OF NEMA AND REGULATION 61 OF THE
ENVIRONMENTAL IMPACT ASSESSMENT REGULATIONS, 2010**

INTRODUCTION

1. This is an appeal against an environmental authorisation granted by the Chief Director: Environmental Affairs, Mpumalanga on 7 June 2016 to Atha Africa Ventures (Pty) Ltd ('Atha') in respect of the Yzermyn underground coal mine near Wakkerstroom ('the EA'). Atha is a subsidiary of the Atha Group, India which is a prominent stakeholder in the Indian mining industry whose business includes coal imports.
2. The first appellant is Earthlife Africa Johannesburg, a largely volunteer-driven organisation founded in 1988 to mobilise civil society around environmental issues in relation to people.
3. The second appellant is Birdlife South Africa, a non-governmental, non-profit conservation organisation whose main concern is the conservation of bird species.
4. The third appellant is the Mining and Environmental Justice Community Network of South Africa, a network of communities, community based organisations and community members whose environmental and human rights are affected, directly or indirectly, by mining and mining-related activities. Its objectives include the promotion and defence of environmental and human rights of communities affected by mining.
5. The fourth appellant is the Endangered Wildlife Trust, a non-profit organisation whose strategies include the identification of human-induced threats and affected species in order to halt or reverse species decline; and the development

of innovative, economically viable alternatives to address harmful impacts to the benefit of people and biodiversity.

6. The fifth appellant is Federation for a Sustainable Environment, a non-profit organisation whose aim is to ensure that mining in South Africa remains environmentally sound, particularly in the context of South Africa's scarce water resources.
7. The sixth appellant is groundWork, a non-profit environmental justice organisation which works primarily in Southern Africa in the areas of climate and energy justice, coal, environmental health, global green and healthy hospitals, and waste.
8. The seventh appellant is the Association for Water and Rural Development (AWARD), a non-profit organisation which specialises in participatory, research-based project implementation aimed at addressing issues of sustainability, inequity, and poverty by building natural-resource management competence and supporting sustainable water-based livelihoods.
9. The eighth appellant is Bench Marks Foundation a faith-based non-profit organisation which works in the area of corporate social responsibility and monitors corporate performance against an international measuring instrument, the Principles for Global Corporate Responsibility: Benchmarks for Measuring Business Performance.
10. Each of the appellants has juristic personality. They comprise both registered non-profit conservation organisations and communities affected by mining in

South Africa. Their objectives include environmental conservation but also advancing the rights of those who are most vulnerable to the effects of environmental degradation. Many of them have the express objective of protecting not only the environment, but the people who depend on it for their livelihoods.

11. The appellants' grounds of appeal are the following:

11.1. The EA does not authorise, and the Environmental Impact Assessment Report upon which it is based ('the EIAR') did not assess, all of the activities triggered by the project which are listed in the Environmental Impact Assessment Regulations Listing Notices 1, 2 and 3 of 2010 (Notices 544, 545 and 546 published in Government Gazette 33306 on 18 June 2010) ('the NEMA 2010 Listing Notices'), more specifically:

11.1.1. The construction of facilities or infrastructure for the generation of electricity where the electricity output is more than 10 megawatts but less than 20 megawatts (activity 1(i) in Listing Notice 1 of 2010); and

11.1.2. The infilling or depositing of any material of more than 5 cubic metres into, or the dredging, excavation, removal or moving of soil, sand, shells, shell grit, pebbles or rock from a watercourse (activity 18(i) in Listing Notice 1 of 2010) – in relation to the underground workings of the mine (**first ground of appeal**).

- 11.2. The Minister of Environmental Affairs ('the Minister') was and remains the competent authority in respect of this application in terms of section 24C(2)(a) of the National Environmental Management Act 107 of 1998 ('NEMA') as it read at the relevant time, and the Chief Director acted without lawful authority when he granted the EA under authority delegated by the MEC (**second ground of appeal**).
- 11.3. The EIAR does not (as it was required to in terms of sections 2(4)(a)(viii), 2(4)(c) and 2(4)(i) of NEMA) contain a proper and objective assessment of the negative impacts of the project on people's environmental rights; and fails to identify that the adverse impacts of the project are likely to be distributed as to unfairly discriminate against poor rural communities in the area who are dependent on the existing natural resources for a livelihood (**third ground of appeal**).
- 11.4. The EIAR does not contain all of the information necessary for the competent authority to consider the application and to reach a decision (regulation 31(2) of the NEMA 2010 Regulations¹); and the EA does not take into consideration all relevant factors including that a risk-averse and cautious approach must be applied (section 2(4)(a)(vii) of NEMA) (**fourth ground of appeal**).
- 11.5. The EA was granted in the face of material concerns on the part of other organs of state with a direct regulatory interest in the project, including the Minister and Department of Environmental Affairs ('the DEA'), and

¹ Notice 664 in *Government Gazette* 33411, dated 30 July 2010

the Department of Water Affairs ('DWA') as it then was, and without any apparent engagement with them, thereby undermining the constitutional principles of co-operative governance and integrated decision-making, and infringing sections 2(4)(l), 24O(1)(c), 24O(2) and 24O(3) of NEMA (**fifth ground of appeal**).

11.6. The EIAR does not comply with several requirements of regulation 31(2) of the NEMA 2010 Regulations, including by focusing inappropriately on the direct 'footprint' impacts of the project and ignoring wider landscape, indirect and cumulative impacts (**sixth ground of appeal**).

11.7. The EIAR does not accurately summarise findings and recommendations contained in specialist reports as it was required to have done in terms of regulation 31(2)(j) of the NEMA 2010 Regulations (**seventh ground of appeal**).

11.8. In light of demonstrably material omissions and misstatements contained in the EIAR, the appellants are concerned that EcoPartners lacked either the expertise or the objectivity or both such attributes which are required of an EAP in terms of the NEMA 2010 Regulations (regulation 17(a), (b) and (c)) (**eighth ground of appeal**).

11.9. The EMPr which forms part of the EIAR does not meet the requirements of section 24N of NEMA and regulation 33 of the NEMA 2010 regulations (**ninth ground of appeal**).

11.10. The EA, being based on the EIAR suffers from the same defects which the EIAR does (**tenth ground of appeal**).

PART A: THE YZERMYN UNDERGROUND COAL MINE IN OUTLINE

12. On 7 June 2016 the Chief Director of the Mpumalanga Department of Agriculture, Rural Development, Land and Environmental Affairs ('the Chief Director') granted environmental authorisation in respect of several activities listed in the NEMA 2010 Listing Notices.
13. The authorised activities are associated with a proposed underground coal mine on portion 1 of the farm Yzermyn 96 HT near Wakkerstroom. The approved surface layout of the mine infrastructure (referred to as the 'Best Environmental Option') is depicted in Annexure 2 of the EA (EA p 26) (see also EIAR p 100 for a clearer copy). The total surface footprint of the mine will be approximately 22.4 ha.
14. The coal will not be treated at the mine (with the result that a proposed discard dump, which originally formed part of the project proposal no longer does). Instead, coal from the underground workings will be stockpiled on a temporary stockpile within the infrastructure footprint area from where it will be loaded on coal transport vehicles for transportation and sale to the market².
15. The extent of the underground workings is depicted in the '*Biodiversity Baseline & Impact Assessment Report*' by Natural Scientific Services CC dated September 2013 (which is Appendix H1 to the EIAR) ('the NSS biodiversity

² EIAR p 12

report')³. A copy of the relevant figure is, for ease of reference, attached marked 'A'. As appears from the figure, the area to be mined is divided into two parts – that which is to be mined in the first 15 years and that which may be mined after that⁴.

16. The mining method which will be employed is the conventional bord and pillar method in terms of which large areas of coal are removed leaving 'pillars' of coal in place to hold up the roof.

17. The mine has the following key features:

17.1. The surface and underground areas of the mine coincide with several wetlands;

17.2. The underground area to be mined in the first fifteen years (which is referred to in what follows as 'the underground area') falls within the Mabola Protected Environment which was declared as such on 22 January 2014 in terms of the National Environmental Management: Protected Areas Act 57 of 2003⁵.

17.3. The underground and surface areas of the mine will be located within the Wakkerstroom/Luneberg Grasslands which is classified as

³ NSS (Appendix H1) p 4

⁴ As appears below, one of the problems with the EA is that it does not describe the project activities which correspond with the listed activities which are triggered by the project at all adequately. It is therefore not clear from the EA that it is in fact only the first phase of the underground mine which is the subject of authorisation.

⁵ EA p 22. Notice No. 20, *Mpumalanga Provincial Gazette* No. 2251, dated 22 January 2014. The project area also borders the Kwamandhlampisi Protected Environment to the east

'Endangered' in terms of the National Environmental Management: Biodiversity Act 10 of 2004⁶.

- 17.4. The underground area lies within 1 km of a DEA designated Freshwater Ecosystem Priority Area ('FEPA')⁷;
- 17.5. The entire surface and underground areas of the mine fall within an area identified by the DEA in the Mining and Biodiversity Guideline, 2013 as having the *'Highest Importance for Biodiversity'* and as being at the *'Highest Risk'* from mining⁸; and
- 17.6. The surface infrastructure of the mine falls largely within an area designated in the Mpumalanga Biodiversity Sector Plan 2013 ('the MBSP') as being an *'Optimal Critical Biodiversity Area'*, while the underground workings of the mine fall largely within an area designated in the MBSP as being an *'Irreplaceable Critical Biodiversity Area'*⁹.
18. As appears from the EIAR, most of the coal produced by the mine will be exported¹⁰.

⁶ NSS (Appendix H1) pp 204, 208

⁷ NSS (Appendix H1) p 209, 210. This refers to a system of classification developed by several organisations working together with organs of state including the DEA and Department of Water Affairs. The NFEPA project resulted in several guidelines one of which is that mining in any form should not be permitted in wetland FEPAs or within 1 km of a wetland/riverine FEPA buffer. The significance of classification of an area as an NFEPA is that it acquires the status of an ecosystem which the national sphere of government has recognised formally warrants special conservation (see for instance Notice No. 83 in Government Gazette 37302 dated 7 February 2014)

⁸ NSS (Appendix H1) 211-212. The DEA Mining and Biodiversity Guideline, 2013 is discussed in greater detail below

⁹ NSS (Appendix H1) 215. Expanded upon below

¹⁰ EIAR p 6

19. Whereas the mine would, according to Atha, generate 576 employment opportunities when fully operational, there is no guarantee contained anywhere in the EIAR, Environmental Management Programme ('the EMPr') or in the conditions of EA that these will be sourced locally¹¹.
20. As regards employment in the construction phase, there would be approximately 70 employment opportunities in total, with approximately 60 being skilled (operators) and 10 management (supervisory) opportunities. The socio-economic specialist study reports that:
- '[s]killed labour is likely to be sourced from outside the [Area of Direct Influence], either regionally or nationally. In addition, management level staff are likely to be sourced in India (Atha's current mining operations), and brought into manage local operations and transfer skills to local employees/trainees on an on-going basis'*¹².
21. The socio-economic specialist study says further that *'[a]lthough there may be a small number of additional unskilled opportunities (e.g. security, community*

¹¹ The EIAR states only that *'[i]t is proposed that semi-skilled and unskilled labour will be obtained from the Gert Sibande District Municipality, specifically from the Pixley ka Seme Local Municipality and Khondo Local Municipality, subject to the recommendations contained within the Social and Labour Plan (SLP). It has been conveyed that where practicable, employment will be sourced locally with the intent to develop local skills required by the time. However, the more highly skilled personnel such as Artisans, Foremen, Shift and Mine Overseers and Mining and Mechanical /Electrical Engineers will be more difficult to source, and may be sourced on a National level. Piet Retief is not situated in a recognized mining area and is a considerable distance away from large city centres or traditional mining areas where the required skills will be able to be sourced.'* (p 137). Despite the reference to a Social and Labour Plan ('SLP'), there is none contained in the EIAR. Page 464 purports to contain an overview of the expected investment of Atha through the implementation of the SLP but the SLP itself is missing. There are only some broadly stated objectives (which also refer to the SLP) (p 784), and certain mitigation measures proposed in the draft EMPr which similarly contain no guarantees that the mine will create employment for local communities (pp 766-767)

¹² Annexure O: Socio-economic specialist study by WSP Environmental (Pty) Ltd dated 19 August 2013 ('the socio-economic study (Annexure O)') p 29. This information does not appear to be contained in the body of the EIAR itself – one has to go to the specialist report to find it

*liaisons, general labourers and cleaners) that could arise, there is unlikely to be significant opportunities for the local population to be employed during the construction phase, and the opportunities are likely to be temporary*¹³.

22. Whereas the socio-economic specialist study recommends that skills development and training be implemented by Atha prior to the construction phase to ensure that individuals in local communities may qualify for employment¹⁴, that is also not provided for anywhere in the EIAR, the EMP¹⁵, or the conditions of the EA. This is a striking omission given that the socio-economic study reports, even in relation to the operational phase, that *‘[d]ue to the limited numbers of unskilled, semi-skilled and skilled employment opportunities, the proposed mine will offer little or no economic benefit for the local area without skills development*¹⁶.
23. By way of contrast, the EIAR reports that eco-tourism contributes materially to job-creation in the area and that if mitigation measures are not implemented, environmental impacts resulting from the proposed mine may degrade

¹³ The lack of creation of employment opportunities during the construction phase is passed over in the EIAR itself

¹⁴ The socio-economic study (Annexure O) pp 29-30

¹⁵ The closest that Atha comes to this is to say in the draft EMP that in relation to *‘non-core activities related to the construction phase of the project’* which it will outsource to local service providers *‘where the skills exist’*, Atha *‘will ensure that contractors have a “skills development” policy and that the policy is adequately implemented’* (EIAR p 767). In other words, Atha will ensure that in relation to *‘non-core’* activities performed by locally sourced service providers (to the extent that Atha uses such service providers – because there may not be any with the requisite skills), it will ensure that these service providers have a skills development policy

¹⁶ The socio-economic study (Annexure O) pp 29-30

surrounding surface and groundwater sources resulting in a reduction of biodiversity in the area and a decline in eco-tourism¹⁷.

24. The target area also supports agricultural employment opportunities. The farm on which the mine will be established is itself currently used for the commercial grazing of livestock (sheep and cattle). Several subsistence farmers have also made their home on the proposed mining site, which has good to excellent grazing capacity¹⁸.
25. There are approximately eight homesteads situated on the proposed mining site which are occupied by low-income families with between eight and thirty people living in each homestead. The households generally rely on limited income from a single family member who works on the host farm, as well as on social grants. This community *'is vulnerable from a livelihood perspective, as they do not have access to finances or other resources should their current income come to an end (i.e. farm work) or access to natural resources, such as water and grazing land, be prevented'*¹⁹.
26. The EIAR does not assess with any precision what the likelihood of the loss of this livelihood is, or what the likelihood of loss of agricultural income and resources in the larger area may be should the mine have any adverse impact on the water sources used by commercial and subsistence farmers in the area.

¹⁷ EIAR p 97 (see also the socio-economic study (Annexure O) p 20)

¹⁸ EIAR pp 83-84

¹⁹ The socio-economic study (Annexure O) pp 17-18

27. The EIAR records that water is sourced by farmers in the area from springs (referred to locally as ‘fontaine’) which are used for both domestic and livestock watering purposes²⁰. There are twenty-three such springs in the project area. The springs are also a water source for the wetlands²¹. According to the EIAR, a lowering of groundwater levels will have a negative impact on, among other things, the springs within the ‘cone of depression’ of the mine (which is a term used to describe an area of impact of the mine on groundwater levels described further below). A drawdown of more than 5m is expected to reduce or dry up springs²². Moreover, possible ‘decant’ points (the points at which contaminated water from the mine void is likely to be release onto the surface post mine closure) are, apart from anything else, potentially connected to the springs²³.

PART B: CHRONOLOGY OF KEY EVENTS

28. On 9 January 2014 EcoPartners CC (‘EcoPartners’) submitted an Environmental and Social Impact Assessment Report to the DEA on behalf of Atha. This version of the EIAR is referred to in this appeal as ‘the original EIAR’. As is explained in Part C.2 below, the Minister was (and remains) the correct competent authority in respect of this application.
29. The original EIAR included several specialist studies which either concluded that the project should not proceed or which raised areas of serious concern.

²⁰ EIAR p 181-182

²¹ EIAR p 206

²² EIAR p 337

²³ EIAR p 342.

30. One of these was the NSS biodiversity report first referred to in paragraph 15 above. The NSS biodiversity report, which also forms part of an amended EIAR which was subsequently provided to the MEC for decision, was commissioned by WSP Environmental (Pty) Ltd ('WSP'). WSP was at that stage the Environmental Assessment Practitioner. At some stage after this WSP was replaced by EcoPartners although the reason for that does not appear from anywhere in the EIAR.
31. The NSS biodiversity report contains the following findings, among others:
- 31.1. Numerous headwater and mountain streams flow from the study area into rivers that drain into the Assegaai river²⁴;
- 31.2. The mine is situated in Rutherford & Westfall's (1994) Grassland Biome which has extremely high biodiversity, second only to the Fynbos Biome²⁵;
- 31.3. Six floral species at a high risk of extinction in the wild were found by NSS in the study area, and 30 species which are listed as Protected Species under the Mpumalanga Conservation Act 10 of 1998²⁶ have been found during surveys of the mining area;
- 31.4. Twenty one Conservation Important ('CI') mammals have been recorded previously in the proposed mining area, and eight CI mammal

²⁴ NSS (Appendix H1) p 22

²⁵ NSS (Appendix H1) p 22

²⁶ NSS (Appendix H1) pp 53-58 and 64-65

species, including one Endangered and five Near Threatened species, were found there by NSS²⁷;

31.5. Eighteen CI bird species have been recorded in or near the proposed mining area, and NSS²⁸ observed five CI species during surveys related to the project²⁹;

31.6. Several globally, nationally or provincially Near Threatened reptiles and frogs are also likely to occur at the site³⁰;

31.7. There are three types of inland wetland in the study area, namely rivers, channeled valley bottom systems (which is a valley-bottom wetland with a river channel running through it) and seeps (which are wetland areas on sloping land dominated by unidirectional movement of water³¹) – a visual depiction of the wetlands is, for ease of reference, attached marked ‘**B**’³²;

31.8. The wetlands are also fed from springs and shallow groundwater from higher topography to the south of the surface infrastructure area³³;

²⁷ NSS (Appendix H1) pp 95-99

²⁸ Together with Delta Environmental Consultants

²⁹ NSS (Appendix H1) pp 100-103

³⁰ NSS (Appendix H1) pp 104-106

³¹ NSS (Appendix H1) p 186

³² NSS (Appendix H1) p 195. The image is based on a previous surface infrastructure layout and still shows the position of a discard area. Although the surface area infrastructure has since been changed, and there will be no discard dump, the image is still useful because of the degree of overlap between the former and current surface layouts

³³ NSS (Appendix H1) p 186

- 31.9. There are several springs within the proposed underground mining area and two more just beyond it³⁴;
- 31.10. The existing impacts on the wetlands caused by, among other things, stands of alien invasive species and cattle tracks is very limited and minor in extent³⁵;
- 31.11. The wetlands have a ‘*VERY HIGH*’ Ecological Importance and Sensitivity (‘EIS’) including because of the Mabola Protected Environment, the current integrity of the site and the numerous CI species identified³⁶;
- 31.12. Underground mining will take place within 1 km of an identified NFEPA (first referred to in 17.4 above) – in this regard the NSS records ‘*[t]he greatest concern ...is the potential impact of the mine on the water resources as a result of underground water reduction due to de-watering activities and groundwater contamination due to sulphate seepage from the mine workings ...*’ and ‘*[B]oth the cone of depression and the groundwater contamination plume extend to the wetland FEPA’s in the near vicinity*’³⁷;
- 31.13. The entire surface and underground workings of the mine fall within an area which has been identified by the DEA in the Mining and

³⁴ See figure 3-8 attached

³⁵ NSS (Appendix H1) pp 196-199

³⁶ NSS (Appendix H1) p 199

³⁷ NSS (Appendix H1) p 209, 210

Biodiversity Guideline, 2013 (first referred to in paragraph 17.5 above) as having the ‘*Highest Importance for Biodiversity*’ and as being at the ‘*Highest Risk*’ from mining³⁸ - meaning that the area is viewed ‘*as necessary to ensure the protection of biodiversity, environmental sustainability, and human well-being*’³⁹;

31.14. The mine will fall within an Important Bird Area (‘IBA’) identified by BirdLife International, which is considered to be ‘*one of the most important IBAs in Africa and ...vital for the conservation of a number of locally- and globally-threatened bird species, as well as the conservation of other fauna and flora*’⁴⁰;

31.15. The surface infrastructure of the mine falls largely within an area designated in the MBSP (first referred to in paragraph 17.6 above) as being an ‘*Optimal Critical Biodiversity Area*’⁴¹, and the underground workings fall largely within an area designated in the MBSP as being an ‘*Irreplaceable Critical Biodiversity Area*’⁴²;

³⁸ The official citation of this document is the ‘*Department of Environmental Affairs, Department of Mineral Resources, Chamber of Mines, South African Mining and Biodiversity Forum, and South African National Biodiversity Institute. 2013. Mining and Biodiversity Guideline: Mainstreaming biodiversity into the mining sector. Pretoria.*’ It is voluminous and is therefore not attached but it may be found on the DEA website

³⁹ NSS (Appendix H1) pp 211-212

⁴⁰ NSS (Appendix H1) p 213

⁴¹ Which means that it is ‘*considered critical for meeting biodiversity targets and thresholds ...which are required to ensure the persistence of species and the functioning of ecosystems*’ (NSS (Appendix H1) Pp 215-216)

⁴² Which means that it has an irreplaceability of less than 80% but collectively with other such areas it incorporates the most biodiversity in the smallest area and therefore provides the most cost-effective options for bio-diversity (NSS (Appendix H1) 215-216)

- 31.16. All of the wetlands on the site are regarded as having Very High sensitivity – they are *‘largely fed by groundwater from the perched, shallow weathered and deeper, fractured aquifers, and are, therefore, sensitive to changes in groundwater levels and water quality’*⁴³;
- 31.17. Buffer zones for wetlands are ineffectual because the loss of wetlands will be due to the decline in water input, namely the dewatering of the shallow and fractured deep aquifers (in other words, they will be affected by the underground workings of the mine)⁴⁴ ;
- 31.18. The project *‘will impact on wetlands, fed by the shallow aquifer, within an area of approximately 5.398 ha and wetlands, fed by springs sourced in the deeper aquifer, within an area of approximately 7.977ha’*, *‘[t]he possibilities for offsets, of this extent within the same catchment, are unlikely’* and since the project is at the head of the W51A quaternary catchment of the Assegaai River and will impact on water resources downstream, *‘no wetland could be offset to the same value and ecological state...as those that would be lost’*⁴⁵;
- 31.19. The direct loss of wetland seeps and paving of the plant area will cause *‘[a] change in the water distribution and retention patterns of downstream wetlands’*⁴⁶;

⁴³ NSS (Appendix H1) p 217, although the study notes elsewhere that the source of water for the wetlands identified within the study area and within the greater cone of depression is unknown (NSS p 231)

⁴⁴ NSS (Appendix H1) p 220-221

⁴⁵ NSS (Appendix H1) p 233

⁴⁶ NSS (Appendix H1) p 240

- 31.20. The main recommended mitigation measure is to avoid all areas of Very High and High sensitivity – *‘This would make the project a No Go as almost the entire undermining area is rated as having a Very High or High sensitivity’*⁴⁷;
- 31.21. As appears from the groundwater model (which is described below), groundwater levels in the shallow aquifer may be lowered by up to 10 m in the southern section of the underground workings of the mine where mining will be deepest, whilst the deeper aquifer will be lowered up to 55 m during years 11 to 16 of mining⁴⁸ (Visual depictions of the extent of the drawdown cones in the shallow and deep aquifers are, for ease of reference attached marked ‘C’ and ‘D’ – as can be seen from these, they will both extend for several kilometres away from the mine);
- 31.22. This lowering in groundwater level *‘will have a negative impact on all wetlands fed by the shallow aquifer and the springs within the cone of depression. These springs are one of the main sources of water for the wetlands in the area...’*⁴⁹;
- 31.23. The *‘decrease in water input to the wetlands within the study area and surrounds, and the resultant reduction in flow, and potential drying up of wetlands will have a HIGH significance on Biodiversity as a minimum*

⁴⁷ NSS (Appendix H1) p 241

⁴⁸ NSS (Appendix H1) p 243-245

⁴⁹ NSS (Appendix H1) p 243

*of 40% of the underground mining area and surface infrastructure footprint area constitutes wetland habitat*⁵⁰;

31.24. The loss or deterioration of wetlands *‘will extend into the wetland FEPAs within the mine lease area and the wetland FEPAs and Wetland Clusters in the immediate surrounds*⁵¹;

31.25. *‘Approximately 42% of the vegetation communities identified within the surface infrastructure footprint and 40% within the mine lease area are moisture dependent...If the dewatering activities have a major effect on the wetland systems identified, these vegetation communities and the potential CI species found within these habitats will be affected and may change in structure in the long term*⁵²;

31.26. Due to the *‘HIGH and long-term (if not irreversible)’* status of the impact of the mine on water inputs *‘in an area far exceeding the study area, the project should be a NO GO*⁵³;

31.27. As regards potential acid mine drainage (‘AMD’) once groundwater levels have recovered (20 to 50 years after mining ceases), *‘AMD represents the most severe impact of coal mining on water resources...The elevated location of the mine will lead to drainage of contaminated water away from the mine. Since the ...mine will be*

⁵⁰ NSS (Appendix H1) p 246

⁵¹ NSS (Appendix H1) p 246

⁵² NSS (Appendix H1) p 251

⁵³ NSS (Appendix H1) p 253

*located in the headwaters of the Assegaai River...it will threaten more than one water resource and thus users ...in the lower catchment*⁵⁴

(AMD can occur after closure of coal mines when the mine void fills with groundwater and contaminants released during the mining process pass into that water which may then ‘decant’ onto the surface);

31.28. Contamination of groundwater will impact on surface water quality downstream⁵⁵; and

31.29. The project *‘is fatally flawed, and should be NO GO in terms of Biodiversity. This is largely because of the impact of the proposed underground mining on the supply of water to the surface water resources (due to the dewatering activities) and the potential groundwater contamination. These aspects will have a significant impact on aquatic and wetland ecosystem functioning and biodiversity in a far greater area than the underground mining area. These and other aspects of the mining project are in strong conflict with international, national and provincial legislation, policies and guidelines...Most potential impacts of the mining operation had a HIGH overall significance rating , even with mitigation*⁵⁶.

32. In short, the biodiversity specialist concluded categorically that the project should not be allowed to proceed at all.

⁵⁴ NSS (Appendix H1) p 255

⁵⁵ NSS (Appendix H1) p 256

⁵⁶ NSS (Appendix H1) p 269

33. The biodiversity specialist relied in part in reaching this conclusion on a *'Specialist Study: Geohydrology Impact Assessment'* by WSP (Adam Smith) dated 3 September 2013 ('the WSP groundwater assessment'). This report formed part of the original EIAR which was placed before the Minister. It does not however form part of the EIAR which was submitted to the MEC for decision by the Chief Director. A copy of the WSP groundwater assessment is therefore attached marked 'E'.
34. The WSP groundwater assessment contains the drawdown cones which were relied upon in the NSS biodiversity report (referred to in paragraph 31.21 above)⁵⁷. The WSP groundwater assessment also reported that *'long-term oxidisation of sulphide minerals exposed in the walls, roof and floor of the mine workings may lead to acid mine drainage'*. Although the assessment concluded that significant movement of contamination from the mining area is only likely to occur 30 to 50 years after mine closure, two model scenarios used in this assessment showed *'potentially contaminated groundwater from the discard facility flowing into the Mawandlane River and the tributary of the Assegai River'*⁵⁸.
35. On 16 May 2014 the DEA rejected the original EIAR as containing insufficient information in relation to several key aspects of concern and highlighted numerous issues which it required to be addressed in an amended EIAR. The DEA required the following:

⁵⁷ WSP groundwater assessment pp 40-41

⁵⁸ WSP groundwater assessment pp 19-20

- 35.1. Confirmation as to whether an alternative layout could be proposed, which would *'allow the proposed mine to coexist within this sensitive area, given the Department's concerns with regards to biodiversity'*;
- 35.2. An amendment to the EIAR to include a new layout plan and an *'update [of] the specialist studies to include for the assessment of the new alternative layout plan'*;
- 35.3. *'[G]round-truthing'* to prove that the development does not impact on the reason for the classification of the site as *'Irreplaceable'* in the Mpumalanga Biodiversity Conservation Plan – The DEA noted that this *'may constitute a fatal flaw'*;
- 35.4. An assessment of the interrelatedness of impacts on ground and surface water – The DEA observed in this regard that *'the area has a high occurrence of wetlands of very high ecological importance'*;
- 35.5. The *'identification of ... downstream water areas, ... water users dependent on the water, and a quantification of the dewatering effect on ... economic activities downstream, including increase in droughts and floods'* - The DEA observed in this regard that the area is classified as an NFEPA *'which means that it is critical for the sustained supply of potable water for downstream communities'* and that *'[d]ewatering of this area at the rates proposed in the study will lead to the lowering of the water table, which is likely to have a very high negative impact on biodiversity, food production and water provisioning to areas downstream'*;

- 35.6. Additional ground and surface water studies in order to adequately quantify the anticipated impacts of Acid Mine Drainage resulting from the underground workings of the mine;
- 35.7. Proper consideration of the '*Critically Endangered and southern African endemic Rudd's Lark*' and the fact that '*[a]pproximately 85% of the global population of Rudd's Lark is confined to the grasslands within a 50 km radius around Wakkerstroom*' - The DEA observed in this regard that the application falls within the Grassland Important Bird Area ('IBA') and that '*[t]his IBA has been recognized by BirdLife South Africa and BirdLife International as both a national (SA 125) and global (ZA 016) IBA that is critical for the conservation of IUCN Red Data List (i.e. threatened) bird species; grassland endemic bird species and congregatory waterbirds*';
- 35.8. Consideration of the facts that '*[t]he study area is surrounded by protected areas to the south and east of the site, and some of the land parcels in the application are part of a declared Protected Environment*' and that a mining licence cannot be issued without the express permission of the Minister;
- 35.9. An assessment of '*all associated infrastructure required for the mine*' and a discussion of all listed activities including '*the pipelines required for the transportation of water and dangerous goods, reservoirs, and any culverts/bridges required for the access roads*';

- 35.10. *‘A geotechnical study/specialist opinion ... in order to address the issue of mine stability and the potential for subsidence’; and*
- 35.11. An assessment of *‘whether the generators alone are sufficient to supply power for the Life of Mine (LOM), or whether the viability of the mine is dependent on the future approval of an alternative power source’* – the DEA noted in this regard that *‘the Department does not support incremental decision making, should the viability of the mine depend upon the future approval of additional power lines or power stations’*.
36. The DEA therefore recorded expressly that it required substantially more information in order for it to be in a position to decide whether the proposed mine should be authorised.
37. Although EcoPartners and Atha went about obtaining certain further specialist reports in order to meet the requirements of the DEA, the reports and amended EIAR which were eventually submitted to the Chief Director do not address any of the concerns raised by the DEA. This is explained in detail in the report *‘Review of Environmental Impact Assessment Report & Environmental Management Programme, and Environmental Authorisation, for Yzermyn underground coal project’* dated 17 August 2016 by Susie Brownlie which is attached marked ‘F’ (‘the Brownlie review’)⁵⁹. The Brownlie review forms an integral part of this appeal.

⁵⁹ Brownlie pp 2-11

38. A striking feature of the specialist reports which EcoPartners obtained in order to address the DEA's concerns is that none of them was obtained from the specialists whose reports had been included as part of the original EIAR (despite the DEA having envisaged an 'update' of specialist reports). Instead, new specialists were appointed, or in some cases EcoPartners simply did the work itself⁶⁰. In one instance, Atha (the applicant for authorisation) purports to provide specialist input (as regards the important issue of the status of the fountains first referred to in paragraph 27 above)⁶¹.
39. It is also worth noting in this regard that the authors of the NSS biodiversity report were concerned enough to take the unusual step of registering as a registered interested and affected party in order to provide further input, and the further input which NSS did provide on 27 October 2014 was in unequivocal terms⁶². NSS said among other things (having reviewed a further groundwater assessment obtained by EcoPartners, to which we turn below) that the impact of the post closure decant of the mine alone could not justify the short-term economic gains of the mine.
40. The groundwater assessment which NSS referred to in its letter of 27 October 2014, is a groundwater assessment by Delta H dated August 2014 (Appendix F) ('the Delta H groundwater assessment'). The Delta H groundwater assessment was one of the reports which EcoPartners obtained in an attempt to allay the DEA's concerns.

⁶⁰ As for instance in the case of a report on impacts on downstream users (Appendix N)

⁶¹ EIAR p 182-183

⁶² Letter dated 27 October 2014 by NSS contained in Appendix G2

41. The Delta H groundwater assessment however substantially confirmed the findings of the WSP groundwater assessment⁶³. More particularly the groundwater model used by Delta H produced a very similar drawdown cone to that modelled by WSP (see in this regard the report by Ingrid Dennis ‘*Review of the groundwater documentation related to the proposed Yzermyn Colliery*’ dated August 2016 which is attached marked ‘G’ and which also forms part of this appeal). The Delta H groundwater assessment went further by concluding that the mine was likely to decant post-closure⁶⁴.
42. There was therefore nothing contained in the Delta H groundwater assessment which would have warranted changing the findings contained in the NSS biodiversity report.
43. EcoPartners also included in the EIAR two other new reports, being:
- 43.1. A report by Scientific Aquatic Services CC (‘SAS’) ‘*Wetland Ecological Assessment as part of the Environmental Assessment and Authorisation Process for the proposed Yzermine Coal Mining Project*’ dated June, August 2014 (‘the SAS 2014 report’); and
- 43.2. A wetland delineation ‘report’ (which is in fact a letter) by SAS dated 9 December 2014⁶⁵.

⁶³ Appendix F

⁶⁴ Delta H (Appendix F) p 69

⁶⁵ Both of these form part of Appendix H. It also obtained an ecological assessment from SAS pertaining to a revised proposed discard dump, which has been rendered irrelevant because there will be no discard dump

44. As is explained by Brownlie⁶⁶, neither of these reports comprises an update of the impacts of the revised surface infrastructure associated with the Best Environmental Option. We pause here to explain that the Best Environmental Option was conceived of by Atha and EcoPartners after the rejection of the EIAR by the DEA on 16 May 2014. Although it is not clear from the EIAR, it appears that this option involves a slight reconfiguration of the surface infrastructure of the mine and the abandonment of the idea that coal would be treated at the site, which means that there will be no discard pile. The underground aspect of the mining operations however remain the same.
45. Apart from not dealing with the surface impact of the Best Environmental Option, neither of the SAS reports challenge in any way the findings contained in the WSP groundwater assessment (as confirmed and expanded upon by Delta H) and the NSS biodiversity report pertaining to the likely effects of the *underground* portion of the mine on the surrounding environment including wetlands and the biodiversity associated with them⁶⁷.
46. In summary, the EIAR which was submitted to the Chief Director and upon which the EA is based, suffers from two fundamental defects (apart from the others described under the individual grounds of appeal below):

⁶⁶ Brownlie p 2

⁶⁷ In fact the SAS 2014 report reiterated that the proposed project ‘*is located within an extremely sensitive area containing extensive wetlands which are presently in very good condition*’ and that ‘*it is the opinion of the ecologists that the project is regarded as having extremely high impacts...*’ SAS 2014 p vi

- 46.1. It does not contain the updated information requested by the DEA, including updated assessments of the effect of the project on wetlands and biodiversity; and
- 46.2. To the extent that it does contain new input from specialists which is of any scientific value, that input buttresses the findings of the biodiversity specialist in the original EIAR.
47. On 7 June 2017 however, the Chief Director granted Atha environmental authorisation.

PART C: THE GROUNDS OF APPEAL

C.1 Listed activities not authorised (first ground of appeal)

48. The appellants' first ground of appeal is that the EA does not authorise all of the activities which are triggered by the proposed project.
49. In particular, the following further activities should have been authorised for the project as proposed to proceed lawfully, which were not:
- 49.1. *'The construction of facilities or infrastructure for the generation of electricity where the electricity output is more than 10 megawatts but less than 20 megawatts'* (activity 1(i) in Listing Notice 1 of 2010); and
- 49.2. *'The infilling or depositing of any material of more than 5 cubic metres into, or the dredging, excavation, removal or moving of soil, sand, shells, shell grit, pebbles or rock from a watercourse'* (activity 18(i) in Listing Notice 1 of 2010) – While this activity was authorised as far as

the surface infrastructure is concerned, it was not authorised in relation to the underground workings of the mine⁶⁸.

50. In the application submitted to the DEA by EcoPartners on behalf of Atha, one of the activities in respect of which authorisation was sought was the one described in paragraph 49.1 above⁶⁹. The description of the project activity which would trigger this listed activity was described as follows: *‘[t]he proposed mine will install generators and the combined electricity output will be more than 10 megawatts but less than 20 megawatts’*.
51. The EIAR says that *‘Based on the mining operation, surface layout and product handing information, Mindset calculated Total Power Demand to be approximately 10.3 MVA. It has been noted that power will be supplied by six onsite diesel fed generators which will have the capacity to generate approximately 12 MVA...’*⁷⁰. This information has not been updated by any specialist report.
52. Since 12 MVA comprises 12MW, the generation of this amount of electricity by generators triggers activity 1(i) in Listing Notice 1 of 2010. The activity ought therefore to have been authorised in the EA.

⁶⁸ EA p 5

⁶⁹ Application form (Appendix B3) p 8

⁷⁰ EAIR p 89

53. As regards the activity in paragraph 49.2 above, it is clear from the EIAR that the surface and underground areas of the mine coincide with large areas of wetland⁷¹.
54. A ‘*watercourse*’ is defined in Listing Notice 1 of 2013 as meaning ‘*a wetland*’ among other things.
55. The underground workings of the mine will therefore involve the excavation, removal or moving of soil, sand, pebbles or rock from a watercourse.
56. The failure of the EA to authorise these activities amounts to material non-compliance with regulation 37(1)(b) of the NEMA 2010 Regulations.
57. More importantly it means that the impacts of at least two critical activities which are triggered by the proposed project have not been assessed in the EIAR and that Atha would be acting unlawfully if it were to commence with the project in these circumstances.

C.2 Incorrect competent authority (second ground of appeal)

58. The appellants’ second ground of appeal is that the MEC is not the competent authority in respect of the listed activities triggered by the project and that the Chief Director therefore acted without lawful authority when he granted the EA under authority delegated by the MEC.

⁷¹ NSS (Appendix H1) p 195

59. The competent authority is in fact the Minister because several of the listed activities which are triggered by the proposed mine have implications for international environmental commitments or relations.
60. Section 24C(2)(a) of NEMA provided at the time that the application was made to the DEA on 8 June 2013 that the Minister must be identified as the competent authority in terms of subsection (1) if the activity '*has implications for international environmental commitments or relations*'.
61. These would include activities which have implications for, among other things, South Africa's obligations under the United Nations Framework Convention on Climate Change⁷². The Minister has recently confirmed⁷³ that she is by virtue of these obligations the competent authority when it comes to authorising NEMA listed activities which relate to the national government's Integrated Resource Plan pertaining to electricity supply. The authorisation of a project which has significant implications for electricity supply falls within this category. It is to be noted in this regard that the EIAR states explicitly that '*[n]egotiations will continue with Eskom regarding the power supply to the site*'⁷⁴.

⁷² See the memorandum dated 19 August 2016 prepared by the Centre for Environmental Rights for purposes of this appeal ('the CER GHG memorandum') for a detailed discussion of South Africa's international and domestic law commitments as regards reducing greenhouse gas emissions (Annexure H to this appeal) (paras 6-18)

⁷³ GN 779 in GG 40110 dated 1 July 2016

⁷⁴ Although the EIAR says that should a substation and power lines be agreed, Atha will be required to undertake a separate EIA process, the DEA expressly required on 16 May 2014 that the question of electricity supply should be resolved in the EIAR to avoid incremental decision making

62. The project also has implications for climate change in that underground coal mining has itself been shown to be a large contributor of greenhouse gas emissions, particularly methane gas, because ventilation causes significant quantities of methane to be pumped into the atmosphere. This is explained in a memorandum dated August 2016 prepared by the Centre for Environmental Rights for purposes of this appeal ('the CER GHG memorandum'), a copy of which is attached marked 'H'. The CER GHG memorandum forms part of this appeal.
63. Further under this head, several of the authorised activities have implications for the Convention on Wetlands of International Importance; the Convention on the Conservation of Migratory Species of Wild Animals; and the Convention on Biological Diversity, each of which has been acceded to by South Africa⁷⁵.
64. The Minister is therefore the lawful competent authority in terms of NEMA in relation to this application and the Chief Director acted without lawful authority when he granted the EA. Any decision which the MEC might take to uphold the EA would be reviewable in terms of the Promotion of Administrative Justice Act 3 of 2000 ('PAJA') as being unauthorised and unconstitutional.
65. Finally under this head, we note that there is no explanation contained in the record for why the application was removed from the remit of the Minister and submitted instead to the provincial department for decision. That this was done is especially concerning since the DEA had clearly engaged with the application

⁷⁵ See for instance activities 11, 18, 26 (First Listing Notice, 2013) and 4, 12, 13, 16 and 19 (Third Listing Notice, 2013) all of which are authorised in the EA

and the original EIAR and had found it to be wanting. The DEA evidently expected that any amended/updated EIAR would come back to it to be assessed against the letter of 16 May 2014. There is no evidence of an amended application form having been submitted (in which the activities to be authorised have changed) and no evidence of an agreement between the MEC and the Minister in terms of section 24C(3) of NEMA agreeing that the former should decide the application.

C.3 The failure to take into account the effect of the project on people in the environment (third ground of appeal)

66. The Brownlie review contains a detailed analysis of how the socioeconomic impacts of the proposed project have been dealt with in the EIAR. Brownlie's assessment is that '*[t]he socioeconomic impacts of the proposed project are not addressed in a balanced and objective way, and fail to incorporate relevant findings of the socioeconomic specialist report (Appendix O). The assessment of these impacts, and conclusions drawn by EcoPartners, are thus highly questionable.*'⁷⁶

67. Brownlie points out, among other things, that:

67.1. '*The EIAR (8.16.4.5) notes that the return of the local economy to agriculture and tourism is likely to take up to 10 years (or longer depending on the degree of impact of the mine on the local physical environment) (p. 468)*';

⁷⁶ Brownlie 16-17

- 67.2. *‘[T]he main livelihoods prior to mining – agriculture and tourism – may be significantly negatively affected; eco-tourism has created about 400 jobs in the Wakkerstroom region (4.13.7 of the EIAR, p. 97) and “The Wakkerstroom and surrounding conservation areas are significant townscapes with a strong future natural based tourist industry” (7.18.2, p. 242)’;*
- 67.3. *‘Impacts of mining on tourism to the wider area and associated economic factors, income generation and employment have not been adequately assessed. Numerous sections in the EIAR refer to the moderate to high potential for expansion of tourism and recreation in the affected area, as well as the diversity of natural resources and aesthetic attributes of the area that serve as the foundation for this sector to grow (e.g. 8.10.3.3, 8.16.3.5, 8.16.4.3, 8.16.4.5) ... (p. 466 of the EIAR)’; and*
- 67.4. *‘The potential influx of labour and job seekers, with associated negative impacts (e.g. 8.16.3.4, p. 455; 8.16.4.2, p. 457-8; 8.16.4.3, pp. 462, 465, 466-468) is inadequately assessed: most communities and local municipalities expressed concern regarding the potential influx of job seekers and labour into the area, which could affect accessibility to social and basic services, specifically healthcare, housing, water and sanitation, sense of place and social conflict’.*
68. The failure of the EIAR to report objectively and fully on the possible effects of the proposed project on people living in the area has the consequence that the

Chief Director was not in a position to take into account the effects of the project on all people in the environment as he was required to do in terms of NEMA.

69. The information which *is* contained in the specialist studies suggests furthermore that the greatest environmental impact of the mine is likely to be felt mainly by vulnerable and disadvantaged persons in the area, namely subsistence farmers and poor rural communities who depend on the natural soil and water resources in the area to sustain themselves.
70. If the EA were to be upheld by the MEC it would be a decision which is in direct conflict with section 2(4)(c) of NEMA which provides that '*[e]nvironmental justice must be pursued so that adverse environmental impacts shall not be distributed in such a manner as to unfairly discriminate against any person, particularly vulnerable and disadvantaged people*'. Whereas the negative impact of the project will be borne by poor communities in the area, the wealth of the natural resource removed from the ground will accrue predominantly to a foreign corporation and its shareholders.
71. Any such decision would also be in conflict with:
 - 71.1. Section 2(4)(i) of NEMA which provides that '*[t]he social, economic and environmental impacts 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*';
and

- 71.2. Section 2(4)(a)(viii) of NEMA which requires that negative impacts on the environment and on people's environmental rights be anticipated and prevented and only where they cannot be altogether prevented, minimised and remedied.

C.4 The absence of information necessary for the competent authority to reach a decision (fourth ground of appeal)

72. The DEA expressly required that certain crucial gaps in information which were evident from the original EIAR should be filled, and that an amended EIAR with updated specialist reports should be submitted.

73. The Brownlie Review contains a detailed analysis of each of the areas of concern raised by the DEA and the extent to which the specific requirements contained in the DEA letter have been met and concludes that none of them has been adequately dealt with⁷⁷. In particular Brownlie makes the following observations, among several others:

- 73.1. In an attempt to address the DEA's request for information about the possible impacts on downstream users and economic activities, EcoPartners itself (lacking the necessary expertise and experience of a specialist in this area) prepared a report which is '*demonstrably unacceptable*' – '*it lacks rigour and a systematic analysis*' and '*makes*

⁷⁷ Brownlie pp 3-11

*a number of vague and wholly inadequate and inconclusive statements*⁷⁸;

73.2. No additional surface water studies were undertaken to quantify the acid mine drainage (AMD) impacts and/ or their rigorous management – despite SAS itself confirming that ‘*...should the project proceed it will have a very high impact on the wetland ecology of the local area. The potential for post-closure decant of water from the underground mine void via the adit and/or unsealed exploration boreholes (Delta H, 2014) is of particular concern, as this will have a long term effect on surface water quality of not only on (sic) the wetlands within the study area, but also on aquatic resources within the greater catchment with special mention of the Assegaai River*’ (p. vi)⁷⁹;

73.3. Although the DEA requested that a geotechnical specialist study be included in the revised EIAR to address the issue of mine stability and the potential for subsidence (subsidence is a probable feature of underground coal mining which leaves voids that may collapse and cause the earth surface to subside), there is no mention or assessment of the risk of subsidence in Appendix C3 (the updated Geotechnical Study)⁸⁰;

⁷⁸ Brownlie pp 4-5

⁷⁹ Brownlie p 6. Brownlie points out further that ‘*Of utmost concern is the fact that the EIAR (7.10.5.1) (p. 188) refers only to the discard dump in discussion of AMD potential. This is an unacceptably narrow view of the potential contamination source linked to coal mining (p 6)*’

⁸⁰ Brownlie p 8

- 73.4. The EIAR fails to assess cumulative impacts adequately and to evaluate their potential significance reliably⁸¹ including the cumulative impacts that would result from a combination of the mine and other mines in the area including the Loskop Coal Mine which also falls within the Mabola Protected Environment⁸²; and
- 73.5. There has been no adequate ground-truthing undertaken to prove that the development does not impact on the reason for the ‘irreplaceability’ classification of the area by the MBSP, which the DEA suggested may constitute a fatal flaw⁸³.
74. Regulation 31(2) of the 2010 regulations provides that ‘*[a]n environmental impact assessment report must contain all information that is necessary for the competent authority to consider the application and to reach a decision*’.
75. Section 2(4)(a)(vii) provides that ‘*[s]ustainable development requires the consideration of all relevant factors including ...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*’.
76. It is clear from the Brownlie review that information which the competent authority considered was necessary for it to consider the application and to reach

⁸¹ A cumulative impact is defined in NEMA as ‘*the impact of an activity that in itself may not be significant, but may become significant when added to the existing and potential impacts eventuating from similar or diverse activities or undertakings in the area.*’ According to the NEMA 2010 EIA Regulations, potentially significant cumulative impacts must be assessed (31(2)(l)(i)).

⁸² Brownlie p 9. In this regard see also the vast areas in the immediate vicinity of the mine in respect of which mining applications were pending when the NSS compiled its report (NSS biodiversity report p 268)

⁸³ Brownlie 9

a decision did not form part of the EIAR at the time that the Chief Director took the decision.

77. There are also several other key gaps in information which would need to have been filled before a decision could properly and lawfully have been taken. These are described in detail in the Brownlie review (pages 18 to 21). One of these includes the risk of downstream flooding and damage to infrastructure (which was in fact also an issue which had concerned the DEA and which it had wanted assessed). The original EIAR had recorded that:

‘...should the dewatering volumes be discharged to Catchment 19 as is proposed, this will increase the flood risk to downstream infrastructure’⁸⁴ and ‘With regards to the impacts of the dewatering volumes on the downstream infrastructure associated with Catchment 19, two road bridges are located across the watercourse adjacent to and at a distance of 5 km northeast of the proposed mine. In addition a farm house is located in close proximity to this watercourse 5 km northeast of the proposed mine. The increase in flow volumes as a result of dewatering to this watercourse, should this option be followed is expected to alter the flood risk to the associated infrastructure.’⁸⁵

78. No assessment was however conducted relating to this threat.

⁸⁴ EIAR para 8.5.4.1

⁸⁵ EIAR para 6.5.3.1

79. Lastly, and importantly under this head, although EcoPartners identified that methane gas may be produced as a result of the coal extraction activities, without mitigation⁸⁶, the EIAR failed to assess or address this impact at all.
80. As appears in greater detail from the CER GHG memorandum, a greenhouse gases ('GHG') emissions assessment should have included two categories of emissions: (1) direct emissions associated with the production of coal and (2) reasonably foreseeable indirect or 'downstream' emissions that occur as a result of the transportation, processing and end use of that coal (e.g. coal-fired power plant combustion). The latter category should have included mining and processing, transportation, and use/combustion - often referred to as the coal life-cycle. The reasons and motivation for this are set out in detail in the CER GHG memorandum⁸⁷. The EIAR did not however include any GHG emissions assessment.
81. Were the MEC to confirm the EA on appeal in the face of these significant gaps in information, the decision would be reviewable on this ground alone.

⁸⁶ EIAR p 495

⁸⁷ CER GHG memorandum

C.5 The failure to ensure integrated decision making and to consult with other organs of state

82. Section 2(4)(1) of NEMA provides that '*[t]here must be intergovernmental coordination and harmonisation of policies, legislation and actions relating to the environment*'.
83. Section 24O(1)(c) provides that a competent authority must take into account the comments of any organ of state charged with the administration of any law which relates to the activity in question.
84. Section 24O(2) provides that the competent authority must consult with every State department that administers a law relating to a matter affecting the environment when it considers an application for environmental authorisation.
85. In the present instance, even if the MEC has been identified correctly as the competent authority it is very difficult to understand how he might approve an EA which is based essentially on the same information which the Minister's delegated authority rejected as being entirely deficient and in the face of the material concerns which the DEA has raised.
86. The appellants have no reason to believe that the DEA was consulted by the MEC or Chief Director before the EA was granted. There is no record of the written comment required in terms of section 24O(3).
87. The duty of the MEC to coordinate his actions with the national department and the Minister is strengthened by the fact that it is the Minister who must ultimately grant written permission for Atha to undertake mining activities in

the Mabola Protected Environment in terms of section 48 of the Protected Areas Act.

88. Furthermore, two other national organs of state, namely the Department of Water Affairs (as it then was) and Department of Mineral Resources raised serious concerns with Atha's application⁸⁸. Although the Chief Director claims to have considered these comments, there does not appear to be any reasonable or rational basis on which the Chief Director could have granted the EA in the face of them.
89. Lastly under this head it would appear that the South African Heritage Resources Agency has not been provided with an opportunity to comment on the revised surface layout of the mine and has not been furnished with a detailed Heritage Conservation Management Plan which it expressly required when it commented on the original EIAR on 6 October 2014. This is so despite the presence of more than site of cultural heritage significance within the existing surface layout plan including a Late Iron Age site of Medium significance⁸⁹.

C.6 Non-compliance with the regulatory requirements of an EIAR (fifth ground of appeal)

90. NEMA and the 2010 Regulations contain detailed requirements with which an EIAR must comply, including that it must contain:

90.1. A detailed description of the proposed activity (regulation 31(2)(b));

⁸⁸ These are included as part of Appendix B to the EIAR and are summarised by Brownlie p 2

⁸⁹ Letter dated 6 October 2014 from SAHRA to WSP (included in Appendix B) read with EIAR p 234

- 90.2. A description of the property on which the activity is to be undertaken and the location of the activity on the property (regulation 31(2)(c));
- 90.3. A description of the environment that may be affected by the activity and the manner in which the physical, biological, social economic and cultural aspects of the environment may be affected by the proposed activity (regulation 31(2)(d));
- 90.4. A description of the need and desirability of the proposed project (regulation 31(2)(f));
- 90.5. A description of and comparative assessment of all alternatives identified during the environmental impact assessment process (regulation 31(2)(i));
- 90.6. A description of all environmental issues that were identified during the environmental impact assessment process, an assessment of the significance of each issue and an indication of the extent to which the issue could be addressed by the adoption of mitigation measures (regulation 31(2)(k)); and
- 90.7. An assessment of each identified potentially significant impact, including (i) cumulative impacts; (ii) the nature of the impact; (iii) the extent and duration of the impact; (iv) the probability of the impact occurring; (v) the degree to which the impact can be reversed; (vi) the degree to which the impact may cause irreplaceable loss of resources;

and (vii) the degree to which the impact can be mitigated (regulation 31(2)(1)).

91. As appears from the Brownlie review, the EIAR falls far short of these requirements. Brownlie notes the following things, among others, in this regard:

91.1. The ‘Best Environmental Option’ is presented as the new preferred alternative, but a consolidated description of the specific components constituting this option is not given⁹⁰;

91.2. The impacts of this option (comprising all of its specific components) are also not distinctly assessed - changes in water requirements, water balance, impacts on surface water and groundwater flows and quality, dependent ecosystems and biodiversity, as well as downstream water users are not adequately addressed⁹¹;

91.3. The EIAR focuses inappropriately on the direct ‘footprint’ impacts and ignores wider landscape, indirect and cumulative impacts⁹²;

91.4. There is confusion between different project alternatives in the specialist reports, most of which were finalised before the ‘Best Environmental Option’ was proposed⁹³;

⁹⁰ Brownlie p 12

⁹¹ Brownlie p 12

⁹² Brownlie p 12

⁹³ Brownlie p 12. Brownlie notes that specialist studies have not been updated to predict and assess impacts of the ‘Best Environmental Option’; many of these studies continue to assess impacts on water resources with the coal discard dump and washing plant in place, leading to a lack of clarity on the

- 91.5. The need for and desirability of the proposed mine was inadequately assessed and based on incorrect and outdated information⁹⁴ (In this regard the appellants also refer to a memorandum dated August 2016 prepared by Earthjustice, United States nonprofit environmental law organization, for purposes of this appeal relating to the current status of the international coal market. A copy of the memorandum is attached marked 'I' and forms part of this appeal);
- 91.6. While the impact rating table contained in the EIAR looks to some extent at reversibility in terms of the duration of impacts, explicit statements regarding the degree to which impacts can be reversed are missing from the EIAR – this omission is serious because impacts that are irreversible may, depending on the value of the affected environment and unless they can be adequately remedied through replacement or substitution of affected resources, constitute an unacceptable impact that is in conflict with the objective of ecologically sustainable development⁹⁵;
- 91.7. The EIAR fails to address explicitly the degree to which the impacts of the proposed mine may cause irreplaceable loss of resources, as required in the NEMA 2010 EIA Regulations (31(2)(1)(vi)) - Loss of

potential significance of the 'best environmental option' impacts and their mitigation. For example, the EIAR (8.7) notes that, *Due to the changes in layout and position of the discard dump (residue stockpile), a new geohydrological assessment was required* (p. 306). However, the results presented in the EIAR reflect geohydrological assessment based on e.g. seepage from the discard dump post closure. Without a reliable prediction of impacts on biodiversity and water resources, the effectiveness of proposed mitigation measures in reducing these impacts is questionable.

⁹⁴ Brownlie pp 25-26

⁹⁵ Brownlie 26

irreplaceable resources would constitute an unacceptable impact that is in direct conflict with the objective of ‘ecologically sustainable development’ as required by the Constitution of South Africa⁹⁶;

91.8. The proposed mitigation measures give no assurance of effective minimisation or remedy of significant negative impacts - A number of residual impacts of medium-high or high significance remain⁹⁷ suggesting that contrary to claims in the EIAR (and environmental authorisation), it is improbable that development of this area could be mitigated to ensure ecologically sustainable development and/ or justifiable social and economic development⁹⁸.

92. The various failures of the EIAR in this regard have as a consequence that it does not meet the requirements of NEMA and the 2010 Regulations. This non-compliance is material with the result that any decision to uphold the EA based on the EIAR would be reviewable on this ground as well.

C.7 The EIAR must contain a summary of the findings and recommendations of specialist reports (sixth ground of appeal)

93. Brownlie reports that *‘[t]here is a major disconnect between the recognition by specialists of the significance of the biodiversity and water resources*

⁹⁶ Brownlie 27

⁹⁷ For example Tables 10-7 and 10-8 in the EIAR (pp 555-573)

⁹⁸ Brownlie pp 12-13

*components...and of likely risks and impacts of the proposed mine on these components, and the findings and conclusions presented in the EIAR*⁹⁹.

94. Some examples of this include the following:

C.7.1 Absence of sensitive species

95. The EIAR contains the following statement as regards what the specialist studies say about the presence or absence of sensitive species: *‘The specialist studies conducted found none of the sensitive species of mammals, butterflies, amphibians, reptiles or plants likely to be associated with these ecosystems. It is likely that these ecosystems do not support the biodiversity that is typical of the area as these ecosystems are no longer in their pristine condition.’* (p. 7).

96. That is entirely irreconcilable with the findings of the NSS biodiversity report¹⁰⁰.

C.7.2 Impacts associated with water quantity and quality

97. The EIAR contains the following statement as regards impacts associated with water quantity and quality: *‘...there might be 15 years of impacts associated with water quantity and limited impacts on water quality, provided the mitigation of impacts are implemented.’* (p. 7)

98. This statement is inaccurate and misrepresents the groundwater and hydrological specialists’ findings that:

⁹⁹ Brownlie p 13

¹⁰⁰ See also Brownlie 13-14

- 98.1. It will take around 45 years for the mine voids to be completely flooded once active dewatering is stopped. Thereafter, decant *via* the adit (or mine entrance) and/or unsealed exploration boreholes in the vicinity is likely to occur. The potential post-closure impacts of decant from the underground mine voids on the groundwater quality are ‘*highly likely*’, long term, and may extend from local to regional scales, depending on the effectiveness of mitigation (Delta H groundwater assessment p 69).
- 98.2. Due to the ‘*HIGH and long-term (if not irreversible) status of this impact in an area far exceeding the study area, the project should be a NO GO*’ (NSS biodiversity review p 253). NSS stated explicitly that ‘*This is largely because of the impact of the proposed underground mining on the supply of water to the surface water resources (due to the de-watering activities) and the potential groundwater contamination. These aspects will have a significant impact on aquatic and wetland ecosystem functioning and biodiversity in a far greater area than the underground mining area. These and other aspects of the mining project are in strong conflict with international, national and provincial legislation, policies and guidelines*’ (p. 269).
- 98.3. ‘*Most potential impacts of the mining operation [have] a HIGH overall significance rating, even with mitigation.*’ (NSS biodiversity assessment p 269).

C.7.3 Impact on the fish population

99. The EIAR says that *‘The most significant feature in terms of the freshwater priority area is the habitat for fish. As this is the origin of the system, it is unlikely that it will have a significant impact on the fish population.’* (pp. 7-8)
100. Apart from the fact that the negative impacts on FEPA’s will have far wider consequences than just for fish populations, according to the NSS biodiversity report, reduced flow will hinder fish migration and could negatively affect three species of Conservation Importance which have been sampled in the Assegaii River catchment. If the flows in these systems change, these species will be lost in these rivers (8.8.4.2) (p. 339). Moreover, changes in water quality conditions could lead to species loss (8.8.4.3) (p. 343). These impacts would undoubtedly be significant.

C.7.4 Impacts on watercourse ecology due to changes in flow and water quality

101. The EIAR says that *‘The potential impact to the watercourse ecology due to changes in flow... has a High environmental significance. This is reduced to Low Medium should mitigation measures be implemented... The operations are expected to lead to a decrease in the water quality, expected to have a High environmental significance, reduced to Medium High should suitable mitigation measures be implemented.’* (p. 298) (emphasis provided)
102. This contradicts the NSS biodiversity report which assigned the following significance ratings to these impacts:

102.1. Impacts on habitat and loss of species are High, but could be reduced to Medium-High with mitigation;

102.2. Decline in water inputs and water quality, leading to deterioration in present ecological state and functionality – are High before and after mitigation (NSS biodiversity report (Appendix H1) Table 4.1 (p. 238))

C.7.5 Impacts of AMD

103. The EIAR says that *‘[d]uring the decommissioning and closure phases, the environmental impacts can be summarised as follows: ... the decrease in the water quality is expected to have a Medium environmental significance, reduced to Low Medium should mitigation measures be implemented.’* (p. 298)

104. But the impact significance of AMD, the direct cause of a decrease in water quality, has not been assessed in any of the specialist studies (WSP groundwater assessment) (p. 19).

C.7.6 Socio-economic impacts

105. The EIAR fails to incorporate several key findings contained in the socio-economic specialist report as appears in greater detail from the Brownlie review (pp 16 to 17).

C.7.7 FEPA Wetlands

106. The EIAR states that *‘The NFEPA database does not indicate any wetlands on or adjacent to the study area...’* (p. 359).

107. This overlooks the following findings contained in specialist reports:

- 107.1. The Assegai River into which drainage from the site will flow is a FEPA river (NSS Biodiversity report (Appendix H1) p 260);
- 107.2. ‘...*The greatest concern regarding the FEPA’s is the potential impact of the mine on the water resources as a result of underground water reduction due to de-watering activities and groundwater contamination due to sulphate seepage from the mine workings and discard facility (WSP, 2013). Both the cone of depression and the groundwater contamination plume, extend to the wetland FEPA’s in the near vicinity.*’ (NSS Biodiversity report (Appendix H1) p 209);
- 107.3. The loss or deterioration of the wetlands on the proposed mining site could, depending on the drawdown cone, extend beyond the study area into the wetland FEPAs within the mine lease area and the wetland FEPAs and Wetland Clusters in the immediate surrounds (NSS Biodiversity report (Appendix H1) p 246);
- 107.4. There are ‘*six wetlands within the north-east portion of the study area*’ which are considered to be in PES Category A/B condition (natural or good) and are classified as Wetland FEPAs (Appendix H3, p. iv).

C.7.8 Conclusion under this head

108. To the extent that the EIAR does not accurately summarise findings and recommendations contained in specialist reports, which we submit is to a material extent, it does not comply with regulation 31(2)(j) of the NEMA 2010

Regulations and any decision by the MEC based on the EIAR would be vulnerable on this ground as well.

C.8 EAP to have the requisite expertise and objectivity

109. The appellants have been unable to establish that either Charlaine Baartjes (the founder and managing director of EcoPartners) or San Oosthuizen are professionally registered with the South African Council for Natural Scientific Professions as they are required to be in terms of sections 18(2) and 20(1) of the South African Natural Scientific Professions Act 27 of 2003 before they may act as paid Environmental Assessment Practitioners.
110. In light of the material omissions and misstatements contained in the EIAR, the appellants are concerned that EcoPartners lacks either the expertise or the objectivity or both such attributes which are required of an EAP in terms of the NEMA 2010 regulations (regulation 17(a), (b) and (c)).
111. The appellants formally request that this appeal and the supporting documents be taken as notice in terms of regulation 18(2) of the 2010 NEMA Regulations to the MEC of suspected non-compliance by the EAP with regulation 17.
112. EcoPartner's lack of objectivity is, the appellants submit, clear from the Brownlie review. This in itself would render any decision by the MEC to confirm the authorisation on the strength of the EIAR reviewable. It goes without saying that non-compliance by the EAP with a statutory registration requirement would have the same effect.

C.9 Non-compliance of the Environmental Management Programme with the NEMA 2010 Regulations

113. The requirements of an EMPr are contained in section 24N of NEMA and in regulation 33 of the NEMA 2010 regulations.
114. The EMPr which was submitted to the Chief Director did not meet the requirements of these provisions¹⁰¹.

C.10 Non-compliance of the EA with the NEMA 2010 Regulations

115. The EA is based on a fundamentally flawed EIAR with the result that it also does not meet the relevant requirements of NEMA and the NEMA 2010 Regulations¹⁰².
116. More particularly the EA does not specify the activities which have been authorised. Crucially, although at least one of the listed activities pertains to the underground workings of the mine, the EA does not contain a description of the extent of the underground area to be mined (as it is required to do in terms of regulations 37(1)(b) and (c)).
117. As regards the question of whether the project should proceed at all, the Chief Director was not placed in a position to assess with any degree of accuracy the implications of the proposed project on the environment and the people who depend upon it. He was presented with an incoherent and internally contradictory report which demonstrably lacks objectivity. He was also not

¹⁰¹ Brownlie pp 29-31 and see p 35 para (c)

¹⁰² See Brownlie pp 31-37

furnished with any of the detailed and crucial information which the Minister's delegated authority had identified as being missing and had requested be furnished before environmental authorisation could be granted.

CONCLUSION

118. In the premises the appellants request that the appeal be upheld.

DATED AT CAPE TOWN THIS 19th DAY OF AUGUST 2016.

A handwritten signature in black ink, appearing to read 'C. Horsfield', is written above a horizontal line.

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