**IN THE WATER TRIBUNAL**

In the appeal of:

| | |
|---|---|
| **KEYSOURCE MINERALS (PTY) LTD.** | Appellant |
| and | |
| **PROVINCIAL HEAD: WESTERN CAPE, DEPARTMENT OF WATER & SANITATION** | First Respondent |
| **DEPARTMENT OF WATER & SANITATION** | Second Respondent |

---

**NOTICE OF APPEAL IN TERMS OF SECTION 148(1) OF THE NATIONAL WATER ACT, 36 OF 1998 ('*NWA*')**

---

1. Take notice that the Appellant intends appealing at a date, time and place determined by the Tribunal Officer against the decision of the First Respondent to refuse the Appellant's integrated water use licence application ('*IWULA*') under section 40 of the National Water Act, 36 of 1998 ('*NWA*') for section 21(a), (c), (f), (g), (i) and (j) water uses on Farm Portions 2 - 3/1378 on Ottery Road in the Philippi Horticultural Area ('*PHA*'), Cape Town, which are related to silica sand mining.

2. The appeal is based on the following grounds:

   2.1. The First Respondent failed to consider properly or at all the public interest in issuing the water use licence ('*WUL*') and the negative socio-economic impact if the WUL is refused (ss. 27(c) and (d)(ii) of the NWA);

   2.2. The lack of formalised wetland offset does not constitute a rational or reasonable basis to refuse the IWULA (s. 27(1)(c), (f) and (g) of the NWA);

2.3. The proposed water uses do not constitute any unacceptable risk to Zeekoevlei (s. 27(1)(c), (f) and (g) of the NWA);

2.4. The proposed water uses will not result in any unacceptable negative impacts on bird species observed within the 1km$^2$ receiving environment, also taking into account the connection to Zeekoevlei, Rondevlei and the greater False Bay area (s. 27(1)(c), (d), (f) and (g) of the NWA);

2.5. The proposed water uses will not result in any unacceptable stormwater impacts on nearby wetlands, including Zeekoevlei (ss. 27(1)(c), (f), (g) and (j) of the NWA);

2.6. The proposed water uses will not result in an irreversible loss of dune slack wetlands (ss. 27(1)(c), (f), (g) and (j) of the NWA);

2.7. The absence of a faunal report does not constitute a material knowledge gap, which could warrant refusal of the IWULA (ss. 27(1)(c), (f), (g) and (j) of the NWA)

2.8. The water uses will not result in any unacceptable adverse impacts on the Western Leopard Toad (ss. 27(1)(c), (f), (g) and (j) of the NWA);

2.9. The proposed water uses will not result in the destruction of 55ha of wetlands or have an unacceptable impact on the aquifer recharge of the Cape Flats Aquifer ('*CFA*') (ss. 27(1)(c), (f), (g) and (j) of the NWA);

2.10. The lack of "support" from the PHA campaign does not provide a rational or reasonable basis to refuse the IWULA (s. 27(1)(c) and (d) of the NWA);

2.11. The absence of an operational stormwater plan does not provide a rational or reasonable basis to refuse the IWULA (ss. 27(1)(c), (f), (g) and (j) of the NWA);

2.12. The absence of a formal process flow diagram does not provide a rational or reasonable basis to refuse the IWULA (ss. 27(1)(c), (f), (g) and (j) of the NWA); and

2.13. The decision to refuse the IWULA constitutes unlawful administrative action in terms of the Promotion of Administrative Justice Act, 3 of 2000 ('*PAJA*');

3. Take notice that the written evidence in support of the appeal is attached hereto.

4. And take notice that the Appellant appoints Marius Diemont of Dawson Edwards & Associates as its representative in this matter.

5. Take further notice that the Appellant will accept service of all documents filed of record in this matter at the offices of the Appellant's representative at –

Dawson Edwards & Associates
De Hoop Building
2 Vriende Street
Gardens
Cape Town

**SIGNED AND DATED AT CAPE TOWN THIS 13th DAY OF SEPTEMBER 2023.**

APPELLANT/ REPRESENTATIVE
Marius Diemont
Dawson Edwards & Associates
De Hoop Building
2 Vriende Street
Gardens
Cape Town
Email: marius.diemont@dawsons.co.za
Tel: (021) 462 4340
Fax: (021) 462 4390

**TO:** **WATER TRIBUNAL, DEPARTMENT OF WATER AND SANITATION**
Att.: Mr. Luyanda Xuba
Acting Registrar of the Water Tribunal

**By hand**
Address: Room 322
Waterbron Building
191 Francis Baard Street
PRETORIA

**By email:**
XubaL@dws.gov.za

DWS File no: 27/2/2/G422/75/1

**AND TO:** **PROVINCIAL HEAD: WESTERN CAPE, DEPARTMENT OF WATER AND SANITATION**
Att: Mrs. NM Bila-Mupariwa

**By hand**
52 Voortreker Road
Spectrum Building
BELLVILLE

**By email**
bila-mupariwan@dws.gov.za

DWS File no: 27/2/2/G422/75/1

**AND TO:** **DEPARTMENT OF WATER AND SANITATION**
c/o Director-General of DWS
Dr. Sean Phillips

**By hand**
Sedibeng Building
185 Francis Baard Street
PRETORIA

**By email**
mdakanep@dwa.gov.za

DWS File no: 27/2/2/G422/75/1

**AND TO:** **PHILIPPI HORTICULTURAL AREA ('PHA') CAMPAIGN**
Registered Interested & Affected Party

**By email**
suscoleman@gmail.com
nasonday@gmail.com

**AND TO:** **CITY OF CAPE TOWN BULK WATER BRANCH**
Registered Interested & Affected Party

**By email**
David.Allpass@capetown.gov.za
Candice.LasherScheepers@capetown.gov.za
Philani.Msimango@capetown.gov.za

**AND TO:** **CITY OF CAPE TOWN BIODIVERSITY MANAGEMENT BRANCH**
Registered Interested & Affected Party

**By email**
Dalton.Gibbs@capetown.gov.za

## I. INTRODUCTION

1. This is an appeal to the Water Tribunal in terms of section 148(1)(f) of the National Water Act, 36 of 1998 ('*NWA*') against the decision of the First Respondent ('*Provincial Head*') on 9 August 2023 to refuse the integrated water use licence application ('*IWULA*') submitted by the Appellant ('*Keysource*') submitted under section 40 of the NWA. The IWULA sought authorisation for section 21(a), (c), (f), (g), (i) and (j) water uses on Farm Portions 2 - 3/1378 on Ottery Road in the PHA, Cape Town, which are related to silica sand mining *via* dredging methods ('*the Philippi Sand Mine*'). A copy of the letter of refusal is attached as Annexure "**A**".

2. Keysource already holds a valid mining right ('*MR*') for the Philippi Sand Mine,[1] including an approved Environmental Management Programme ('*EMPR*'), as well as an Environmental Authorisation ('*EA*') for the relevant listed activities under the National Environmental Management Act, 107 of 1998 ('*NEMA*').[2]

3. Keysource submitted the IWULA on 23 January 2023. Keysource was notified of the Provincial Head's decision dated 9 August by way of e-mail on 15 August 2023. In an abundance of caution, however, this appeal will be served on 14 September, i.e. within 30 days of receipt of the e-mail. Keysource further intends to amplify the grounds of appeal as contemplated in Rule 3(2).

4. In many instances, the "reasons" cited by the Provincial Head fall short of the level of specificity required under section 5 of PAJA.[3] Mere conclusions are cited in support of the decision, instead of information which explains why the decision was taken.

6. This appeal is structured as follows:

   6.1. At the outset, an overview of the parties is provided, including a description of Keysource's ownership, its commitment to social and economic empowerment, as well as environmental sustainability.

---

[1] WC 30//5/1/2/2/10047 MR dated 4 December 2019.
[2] 16/3/1/2/A2/30/3001/142 dated 27 July 2016.
[3] The Promotion of Administrative Justice Act, 3 of 2000 ('*PAJA*').

6.2. Thereafter, the reasons why this appeal is urgent and warrants an expedited hearing are set out.

6.3. A brief summary of the material facts follows.

6.4. An overview of the Philippi Sand Mine is provided, including the proposed development phases and relevant water uses;

6.5. The IWULA process is then dealt with;

6.6. Finally, reasons for the refusal and the grounds of appeal are set out.

## II. THE PARTIES

### A. The Appellant

7. The Appellant is Keysource, a company duly incorporated in accordance with the Company Laws of South Africa, with registered offices at Consol House, Osbourne Road, Wadeville.

8. Keysource is one of the subsidiary mining companies of Apex Silica Mining (Pty) Ltd. ('*Apex*'), the holding company in the mining division of Ardagh Glass Packaging Group Africa (Pty) Ltd. ('*Ardagh*'), formerly known as Consol Holdings (Pty) Ltd. ('*Consol Holdings*').[4] As the IWULA includes references to Consol Holdings and Consol Glass (Pty) Ltd. ('*Consol*'), this appeal will use the same designations so as to avoid any confusion.

9. Keysource submitted the IWULA on 23 January 2023 with the consent of the landowner, Consol.[5]

10. Consol is the largest glass manufacturer in Sub-Saharan Africa, with an operating history of 70 years in South Africa. Consol has four glass manufacturing plants in South Africa located in Bellville (Western Cape), Clayville, Nigel and Wadeville (located in Gauteng). The four sites produce a

---

[4] See the diagram of the mining structure provided in the Keysource IWULA Section 27 Motivation Report prepared by Umvoto Africa (Pty) Ltd. ('*Umvoto*') dated June 2022 ('*WULA, Section 27 Motivation Report*') at p. 16, Figure 6.

[5] The consent dated 14 April 2021 is attached as Annexure B to the WULA, Section 27 Motivation Report at p.51.

range of glass packaging for the food and beverage industries.[6] Blue-chip customers include South African and international companies such as AB Inbev, Distell, Diageo, Heineken, Namibia Breweries Limited, Tiger Brands, Breerivier Bottling, Douglas Green Bellingham, Edward Snell & Co, Coca-Cola and Appletiser.

11. The glass industry has specific chemical requirements for its raw material of which the most important is that the Silicon Dioxide (Si02) content of the sand used must be higher than 99.5% and the Iron Oxide (Fe203) must be lower than 0.03%. Glass production also requires limestone, soda ash and other chemicals to colour the glass.

12. In order to ensure a continuous supply of high-grade silica sand, Consol has integrated silica mining into its portfolio. In South Africa and Kenya, Consol supplies 50% of its silica sand requirements from own mining operations.

13. The Consol manufacturing plant in Bellville started production of container glass for the wine, beer, fruit juice and food markets in 1956. High-grade silica sand for the Bellville plant was and is still obtained from the Consol-owned Athlone Mine situated in Athlone, approximately 19km from the Bellville plant.

*Ownership*

14. In order to ensure that Consol's mining operations within the group complied with the Mineral and Petroleum Resources Development Act, 28 of 2002 ('*MPRDA*') and the provisions of the Mining Charter, Consol restructured its mining interest into a separate mining company, Apex, with the consent of the Department of Mineral Resources ('*DMR*'). 70% of the shares in Apex are owned by Consol and 30% by an empowerment company, Zuberi Investments (Pty) Ltd. ('*Zuberi*').[7]

---

[6] Beverage industries include the beer, alcoholic fruit beverage, spirits, wine, fruit juice, soft drinks and mineral water markets.

[7] Zuberi, in turn, has two shareholders, namely the Lekan Staff Trust and the Jelani Management Trust. Each trust has four trustees. All four trustees are black (as defined in the Codes of Good Practice Issue in terms of the Broad-based Black Economic Empowerment Act of 2003.

15. As part of the restructuring process, Keysource took cession and assignment of the MR from Consol on 7 March 2022, having obtained the consent of the Director General: Mineral Regulation under section 11(2) of the MPRDA on 8 March 2019.

16. Keysource is 48,76% black-owned. As Keysource is a dormant company within Consol's mining division, the company has not conducted a B-BBEE audit and therefore does not have a B-BBEE certificate.[8] Consol is 55,11% black owned and has achieved a Level 4 Contributor Status against the Revised Codes of Good Practice,[9] as rated by Empowerdex.[10]

*Social and economic transformation*

17. Keysource's commitment to social and economic transformation as contemplated in section 27(1)(b) of the NWA is demonstrated by its 48.76% black ownership and implementation of B-BBEE and Equity policies, as well as employment equity- and community projects.[11]

*Environmental Sustainability*

18. Consol bottles are made using up to 70% recycled glass (cullet) and part of its Corporate Social Investment (CSI) and environmental responsibility includes expenditure on cullet recycling plants at the company's Bellville and Clayville operations.

19. Consol encourages glass recycling as a preference to raw material use for glass manufacturing to further support Consol's long-term sustainability and provide a competitive advantage for glass versus other packaging. Glass is both re-usable and fully recyclable. As a result Consol has invested a significant amount of capital (R180 million) to install a recycling plant in Bellville and the company is committed to buying all the recycled glass that is tendered to them.

---

[8] See affidavit of Mr. Holomisa, attached to the WULA, Section 27 Motivation Report at p.49.
[9] See B-BBEE Verification Certificate attached to the WULA, Section 27 Motivation Report at p.50.
[10] Empowerdex is an accredited Economic Empowerment Rating Agency.
[11] WULA, Section 27 Motivation Report at p. 16, section 2.2.

20. There are more than 3 000 bottle banks strategically placed in cities throughout South Africa to assist in domestic recoveries. This waste glass is collected by local independent registered waste collection agents and sold back to the glass packaging industry.

21. The operations at Consol Bellville plant have adapted greatly to market demands and continuous improvement to supply container glass in a sustainable manner. It is believed that more than 40% of available glass in South Africa is recovered. Consol purchases all of the recycled glass that is available. In order to increase the recovery above 40% would most likely require some form of regulatory intervention from government.

22. Over the past ten years, Consol has increased purchases of cullet[12] by some 550% to 217 000 tons. This has displaced the need for 310 000 tons of silica. Consol continues to pay a significant premium for recycled glass versus newly mined sand and continues to engage with the authorities and consumers to further improve the recycling rate in Cape Town and the country in general.

23. Consol is also leading an environmentally-conscious drive to further reduce the carbon footprint of glass packaging through the deployment of even more advanced technology and processes to manufacture bottles and jars that weigh up to 32% less without any loss of strength or quality. In addition to this Consol invests operational expenditure relating to the glass recycling projects which supports local business.

24. Keysource is further committed to Best Practice in terms of water use in its mining operations. In order to ensure the efficient and beneficial use of water in the public interest (section 27 (1)(c) of the NWA), the water management strategies, infrastructure and mining techniques that will be implemented at the Philippi Sand Mine will be designed according to best practice design principles. The WULA details various mechanisms to optimise water use and minimise clean water contact with dirty water areas. Keysource further aims to recirculate and reuse almost all water and add no chemicals in their process to minimise

[12] Recycled broken or waste glass used in glass-making.

the impact to the water resource. Finally, the WULA proposes effective mitigation measures, such as the covering of a retention pond to reduce evaporation and the installation of a reverse osmosis plant should there be an indication of water quality degradation.[13]

**B. The Respondents**

25. The First Respondent is the Provincial Head: Western Cape of the Department ('*Provincial Head*') of the Department of Water and Sanitation, Mrs. NM Bila-Mupariwa, cited in her capacity as the responsible authority who refused the IWULA on 9 August 2023.

26. The Second Respondent is the Department of Water and Sanitation ('*DWS*'), cited care of the office of the Director-General.

## III. URGENCY

27. Consol currently sources 100% of the silica sand required to produce glass at its 315 000-tonne plant in Bellville from a mine in nearby Athlone.[14] Consol employs more than 400 people in this plant.

28. However, the mine, which it owns *via* its subsidiary Apex, is reaching the end of its useful life. The primary raw material used in the manufacture of container glass is silica sand, which is combined with soda ash, limestone, and cullet.

29. In 2009, in anticipation of the closure of its existing silica sand mine, Consol began preparations to secure an alternative supply of this critical input. These efforts culminated in the issuing of the MR (with EMPR approval) and EA for the relevant listed activities under NEMA. The silica deposit at the Philippi Sand Mine, like the existing mine at Athlone, is relatively close to Consol's Bellville plant – about 20km by road.

30. Silica reserves at the Athlone mine will depleted by 2025. Current production at the mine has also seen a decrease in the grade of silica, which has resulted in increased production costs at the Bellville plant.

---

[13] WULA, Section 27 Motivation Report at p. 17, section 2.3.
[14] Approximately 19km from the plant.

31. Current production at the Bellville plant has already decreased by 30%. It is estimated that the production lines at the Bellville plant will have to be closed in two years' time, if mining operations do not commence at the Philippi Sand Mine. This, in turn, will affect various downstream industries.

32. As detailed below, the duration of the construction phase of the Philippi Sand is two years, with simple extraction of the silica raw material commencing only in the second phase (years 2 – 4), and the commencement of beneficiation in phase three (years 4 – 6).

33. For these reasons, it is submitted that this appeal is urgent and warrants an expedited hearing.

## IV. BRIEF MATERIAL FACTS

34. In April 2014, Consol applied for a mining right ('*MR*') for the mining of silica sand on Farm Portions 2 - 3/ 1378 in terms of section 22 of the MPRDA.

35. The Integrated Environmental Authorisation process included the following: (i) an Environmental Management Programme ('*EMP*') application in terms of the MPRDA; (ii) environmental authorisation ('*EA*') in terms of NEMA; (iii) an Integrated Water Use Licence Application ('*IWULA*') in terms of the NWA; and (iv) an Application for Consent Use and Regulation Departure in terms of the Western Cape Land Use Planning Ordinance of 1985 ('*LUPO*').

36. Consol appointed GCS Water and Environment (Pty) Ltd. ('*GCS*') as the Environmental Assessment Practitioner ('*EAP*') to conduct the Environmental Impact Assessment ('*EIA*') process and prepare the Environmental Management Programme ('*EMPR*').

37. Consol submitted the mining-related NEMA application in April 2014, i.e. prior to the commencement of the One Environmental System ('*OES*') on 8 December 2014. Accordingly, the application was governed by the transitional provisions set out in Regulation 54 of the 2014 NEMA EIA Regulations, with the Department of Environmental Affairs and Development Planning ('*DEADP*') as competent authority. As detailed further below, the EIA process was extensive and involved the identification of all environmental, social and economic

impacts and benefits, as well as the specialist assessment of all identified impacts and benefits by reputable specialist consultants.

38. The EIA process included a comprehensive scoping phase, including the identification of scoping phase issues, compilation of a stakeholder database and the development of a plan of study for the EIA phase. The scoping report was developed and submitted for review by the I&APs and DEA&DP.

39. Various meetings and site visits were undertaken with relevant authorities, including- (i) a site visit attended *inter alia* by DWS on 3 February 2015; (ii) a site visit and meeting with Cape Nature, City of Cape Town Biodiversity Management Division and Working for Wetlands representatives on 26 March 2015; (iii) a site visit and meeting on 17 February 2016 with DWS representatives from the regional office, as well as from the Section (c) and (i) Wetland department to discuss the wetland delineation and a plan of study for the Wetland Offset Assessment; (iv) a meeting with DWS representatives, as well as various independent specialists identified by DWS to garner input in determining a Plan of Study for the Wetland Offset Assessment.

40. The EIA report included assessment of, *inter alia*, a wide range of impacts and benefits by independent and experienced specialists: Air Quality Impact Assessment; Biodiversity Impact assessment; Geohydrology Impact Assessment; Heritage Assessment;[15] Hydrology Assessment;[16] Noise Impact Assessment; Social Baseline Assessment; Soils, Land Use and Land Capability Impact Assessment; Traffic Impact Assessment; Visual Impact Assessment; and a Wetland Impact Assessment.

41. In May 2015, Consol submitted its first IWULA for the Philippi Sand Mine, which was ultimately rejected by DWS in November 2019.[17] Consol commenced with an appeal process, but subsequently decided to withdraw the appeal and instead began to draft a new application.

---

[15] Notice of intent to develop only.
[16] Stormwater Management Plant only.
[17] See Appendix C to the WULA Section 27 Motivational Report, *viz*. the Assessment of the Potential Socio-Economic Impact of a new Silica Mine within the Philippi Horticultural Area, prepared for Apex Mining by Nova Economics dated 26 May 2022 ('*Socio-Economic Impact Assessment*') at p.6.

42. On 4 December 2019, DMR awarded the mining right to Consol in terms of section 23(1) of the MPRDA and approved the EMPr which included extensive conditions aimed at ensuring the environmental sustainability of the mining development. The decision-maker had before him the application documents required under section 22, as well as extensive supporting documentation which included a comprehensive EIA and EMPR which addressed the socio-economic and environmental impacts (including in respect of water resources) and benefits in detail.

43. The NEMA Environmental Authorisation was granted by DEADP on 27 July 2016. In a decision dated 26 June 2017, the Western Cape Minister of Local Government, Environmental Affairs and Development ('*MEC*') dismissed internal appeals against the EA.

44. Pursuant to the cession and assignment of the MR to Keysource in March 2022, Keysource submitted the IWULA on 23 January 2023. The IWULA process is dealt with in greater detail further below.

45. As already noted above, Keysource received notice of the refusal of the IWULA on 15 August 2023.

## V. THE PHILIPPI SAND MINE & INTENDED WATER USES

### A. Location

46. The proposed Philippi Sand Mine is to be constructed on the approximately 55 hectare (ha) site, which is located in the north-western portion of the PHA. The silica sand[18] occurs within the aeolian Springfontyn Formation of the Sandveld Group which is locally known as the CFA.

47. The site is currently used for agricultural practices, which have largely transformed it.[19] As described more fully elsewhere, there are three natural but transformed wetlands located on the northern portion of the property which are fed by the shallow perched aquifer, and one fully transformed wetland in the

[18] Consisting of a minimum of 95% quartz grains, of which the silica content is > 98%; see WULA Summary dated January 2023 ('*WULA Summary*') at p. 2, para 3.
[19] See WULA Section 27 Motivation Report, p. 2, para 1.2.

central portion of the property. The current farmer confirms that he cannot use groundwater from the CFA underlying the property for irrigation due to the high salinity, and instead brings water from further afield to the site.

48. The importance of the silica sand resource in the PHA, the support for silica mining within the PHA in policy and planning documents, and the significant socio-economic benefits that would likely flow from the Philippi Sand Mine are detailed in the first ground of appeal.

**B. Phased Approach & Water Uses**

49. The Philippi Sand Mine will be implemented over seven phases, which will require different water uses as detailed below. The mining technique used will vary from excavation in the first six years to dredging, due to the high groundwater level within the CFA, for the remainder of the life of mine ('*LoM*'), which is in excess of 30 years. During the mining of the aeolian silica sand, the deposit is expected to yield 70% Glass/Foundry Sand and the remaining will be further beneficiated into Special Sands (20%) and Overburden and Silt (10%).[20]

50. These phases can be summarised as follows:

    50.1. Phase 1 (year 0 – 2). During the construction phase, an excavator and frontend loader will prepare the retention pond, the processing plant and concrete roadway for delivery vehicles.[21] This phase will result in the loss of the four transformed wetlands on site, constituting water uses under sections 21(c) and (i) of the NWA;[22]

    50.2. Phase 2 (year 2 – 4).[23] This early development phase will focus on the simple extraction of the silica sand raw material[24] and basic processing by means of an excavator and front-end loader (shallow excavation), as well as pumping and screening equipment. The retention ponds

[20] See WULA Summary at p. 2, para 3.
[21] This will entail the extraction of 50 tonnes of silica sand per day.
[22] See WULA, Keysource Hydrogeological Technical Report prepared by Umvoto dated January 2023 ('*WULA Hydrogeological Technical Report*') at p.8, section 1.5.1.
[23] See WULA Section 27 Motivational Report at p. 2, para 1.2; WULA Hydrogeological Technical Report at p.8, section 1.5.2. and the IWULA Keysource Freshwater Specialist Assessment ('*Freshwater Specialist Assessment*') at p. 48-49, para 5.1.
[24] 200 tonnes per day.

excavation will be filled with groundwater, which will be used for water supply throughout the plant (s. 21(a) water use).[25] The retention pond is in direct contact with the water resource, allowing water to seep back into the water resource (s. 21(f) water use). The only water that will leave the site is moisture trapped in the sand leaving the premises (s. 21(a) water use).[26]. This phase will also include the abstraction of groundwater from the retention pond [27] for dust suppression (s. 21(a) water use).[28]

50.3. Phase 3 (year 4 – 6).[29] Beneficiation commences in this phase, requiring mass storage facilities for the silica sand, as well as excavation of the silica sand (~300 t/d) for the development of the second retention pond. Hydrosizing processes will be used to beneficiate the sand using groundwater pumped *via* pump stations from the retention ponds to separate the sand slurry in bespoke particle sizes (s. 21(a) water use).[30]

50.4. Phase 4 (year 6 – 8).[31] This process entails dredging to a depth of 20 metres below water level or until the confining clay layer is encountered, using a bucket wheel dredger. The dredging will increase the volume of groundwater pumped to the plant and therefore increase the water and overburden from the Trommel Screen to the PCD and retention ponds (ss. 21(j), (g) and (f) water uses).

50.5. Phase 5 (year 8 – 10).[32] In the final development phase, a special sands facility will be introduced to accommodate the processes required to satisfy the various industry demands of material type.[33]

---

[25] No groundwater is consumed during the process. The groundwater is recirculated *via* a fines removal process back into the Pollution Control Dam ('*PCD*') (s. 21(g) water use) and from there into the retention pond where pump stations will supply water to the processing plant.
[26] which is expected to be 5% or 10 cubic metres per day (m3/d) (3,650 m3/a),
[27] 5,000 m3/a.
[28] Water and sewerage services will also be installed on site for personnel.
[29] WULA Hydrogeological Technical Report at p.8, section 1.5.3.
[30] See WULA Section 27 Motivational Report at p. 3, para 1.2
[31] WULA Hydrogeological Technical Report at p.9, section 1.5.4.
[32] WULA Hydrogeological Technical Report at p.8, section 1.5.5.
[33] The process of drying the sand requires an Integrated Water and Waste Management Plan ('*IWWMP*') and Stormwater Management Plan ('*SWMP*') but does not trigger any water use.

50.6. Phase 6 (year 10 – 30).[34] This phase will see the ramping up of operations to reach full production around year 10.

50.7. Phase 7.[35] The closure phase includes the rehabilitation of the open body of water that will remain, resulting in some additional environmental benefits. Keysource intends to develop the site into a recreational area, consisting of open spaces (such as an urban park and/or nature reserve), a dam (open water body) and a wetland area. The open water bodies is likely to attract bird species and could have viable eco-tourism potential for bird watchers.[36]

## VI. IWULA PROCESS

51. As already foreshadowed above, Consol decided to withdraw its appeal against DWS' refusal of its first IWULA and commenced work on a new application.

52. On 2 September 2020, Umvoto was appointed to undertake the IWULA on behalf of Consol and, subsequently, its successor in title, Keysource.

53. In November 2020, Umvoto began the process of opening Phase 0 of the e-WULAAS. The necessary documents were uploaded in April 2021, after the cession of the MR to Keysource was finalised.

54. On the 28 June 2021, Umvoto were informed that the DWS had assigned a case officer to the application, but the details of the case officer were not provided. After numerous emails to the DWS, a case officer, Mr Sboniso Nduli, was finally assigned to the application on the 11 August 2021.

55. On 25 August 2021, a pre-application meeting was held with DWS, Keysource and Umvoto. During the meeting, it was agreed that Phase 1 would be opened, but that the new application would have to address all concerns raised in the rejection of the previous application. It was further agreed that a meeting will be

---

[34] WULA Hydrogeological Technical Report at p.8, section 1.5.6.
[35] see generally WULA Hydrogeological Technical Report at p.8, section 1.5.7.
[36] See Socio-Economic Specialist Assessment at p. 50; see also WULA Summary Report at p.9, section 9.

set up with the DWS groundwater specialists to determine if the proposed mitigation measures are sufficient or if any additional studies are required.

56. On 6 October 2012, the specialist meeting agreed upon at the pre-application meeting was held *via* Microsoft Teams. During the meeting, it was agreed that Umvoto's proposed approach would address DWS' concerns with the previous IWULA.

57. In November 2021, Umvoto requested a meeting with the DWS case officer, Mr. Sboniso Nduli, to confirm certain aspects relevant to the Phase 1 Section 27. DWS advised, however, that the case officer had left DWS and that a new case officer would have to be assigned to the application. Despite repeated follow-up emails in November – December 2021, no replacement case officer was assigned to the application, delaying submission of the Section 27 Motivation and to move into Phase 2 of the e-WULAAS.

58. Finally, following the assignment of a new case officer, Mr. Vuyokazi Kweza, a pre-application meeting was held on 11 March 2022.

59. No site visit was requested by the DWS, as the application was moved straight from Phase 1 to Phase 3.[37]

60. Public participation was carried out between 10 August and 9 October 2022. This included a site notice, an advert in the *Cape Times* newspaper, an online notice on the Umvoto website and discussions with landowners visited during the hydrocensus. Three stakeholders registered during the public participation period; in person meetings were held with them, *viz*. the Philippi Horticultural Area Campaign ('*PHA Campaign*'), the City's Biodiversity Management Branch ('*CCT BMB*') and the City's Bulk Water Branch ('*CCT BWB*'). The stakeholders' comments, along with responses, are detailed in the Keysource IWULA Public Participation Process Report prepared by Umvoto dated January 2023 ('*WULA PP Report*').[38]

---

[37] Phase 2 includes a site visit.

[38] See pp. 8 – 46, sections 3.1 – 3.3 of the PP Report.

61. As already stated elsewhere, the IWULA was submitted on 23 January 2023.

## VII. REASONS FOR REFUSAL

62. DWS' refusal (Annexure "A" attached above) cited twelve reasons in support of its decision –

62.1. "The Resource Protection unit recommends that an alternative location must have been identified where the wetland hectarage that is to be lost due to the proposed activity can be re-created as an offset, so that the ecosystem services can be maintained."

62.2. "One of the significant habitats recognized by the City of Cape Town is the Zeekoevlei, a RAMSAR site that is close by the proposed activity."

62.3. "The proposed mining area is part of a 1km square area with reported sighting of 98 bird species with the predominance of flamingos and other water birds. This area is connected to Zeekoevlei, Rondevlei and the greater False Bay conservation area."

62.4. "Given that the Zeekoevlei is currently very much intact and has a very high biodiversity richness, the loss of habitat and species variety related to the type of wetlands and vegetation is considered to be a high risk."

62.5. "The increased impacts of stormwater runoff on the nearby wetlands, including Zeekoevlei, may have a detrimental impact on the water quality that reaches the watercourses connected to Zeekoevlei."

62.6. "Since dune slack wetlands are a delicate ecological habitat, their loss is irreversible as it supports habitat to various floral and faunal communities."

62.7. "No information was provided regarding a faunal report that would have addressed the existence of any large predator bird species or the Western Cape Leopard Toad species, a species classified as endangered."

62.8. "The Western Leopard Toad (*Ametophrynus pantherinus*), an amphibian species that is only found in a very small area of the Western Cape, from the Cape Town Peninsula eastward to the westernmost part of Agulhas National Park, is confirmed to be an endangered species by external documents referred in this application."

62.9. "This application will destroy 55ha of wetlands, these four wetlands recharge the aquifer in winter months."

62.10. "The Philippi Horticultural Area (PHA) campaign as an IAP did not support this mining activity as such activities will have a significant impact on the PHA environment and heritage, the Cape Flats Aquifer, the surrounding community and especially the food and water security of the greater CCT."

62.11. "An operational manual on how the stormwater will be managed and how the requirements of Government Notice 704 (Government Notice 20119 of June 1999) was not submitted."

62.12. "A process flow diagram of the water to include; the source, retention dam(s), processing flat, process control dam (PCD) and return to source indicating the amount of water and losses at each control point as well as any process waste generated was not submitted with this application."

## VIII. GROUNDS OF APPEAL

63. Given the severe time constraints under which this appeal is filed, Keysource intends to amplify these appeal grounds as soon as reasonably possible. As the subject-matter of many of the "reasons" overlap, they are dealt with holistically.

**Ground 1: Failure to consider properly or at all the public interest in issuing the WUL and the negative socio-economic impact if the WUL is refused (ss. 27(c) and (d)(ii) of the NWA)**

64. As already detailed at paragraph 24 above, Keysource is committed to Best Practice in terms of water use, which is demonstrated by the various protocols

and mitigation measures detailed in the WULA Hydrogeological Technical Report.

65. While it is so that the proposed water uses do not entail any direct benefit to the public, these water uses have significant indirect benefits. These water uses allow silica sand mining, which has wide-ranging indirect benefits. At the local level, the mine creates much needed jobs; at the regional and national level, the mine will supply silica for water purification systems and glass production in numerous sectors across South Africa, e.g. the wine industry in Western Cape. These benefits align with the National Water Resource Strategy, which has a vision of "Sustainable, equitable and secure water for a better life and environment for all" (DWA, 2013b).[39]

66. In addition, the establishment of a voluntary organisation by Consol called "The Glass Recycling Company ('*TGRC*') promotes glass recycling in South Africa, which has seen an increase in its glass collection recycling rate from 18% in 2006 to 44% in 2020 (with a goal of increasing that to 65% by 2026). TGRC notes that in addition, about 80% of all glass packaging placed on the market in South Africa is diverted from landfill, for potential recycling or re-use.[40]

67. Signficantly, the Philippi Sand Mine targets one of the last remaining high-grade silica deposits in South Africa, with other mines forced to mine quartzite deposits in Gauteng and the Northwest, and quartz veins near Polokwane.[41]

68. Most sand deposits are not of sufficient purity or silica content for glassmaking. It is estimated that industrial sand meeting the extremely high chemical and physical requirements of the glass industry represents < 1% of the ~ 50 billion tonnes of sand that is extracted internationally every year. Indeed, a previous study[42] recommended that the silica deposit in the PHA be preserved for mining,[43] a resource amounting to ~315 million tonnes. This is supported by the

---

[39] See WULA Section 27 Motivation Report at p. 17, section 2.3.
[40] *Id.* See also WULA Socio-Economic Specialist Assessment at p. 15, section 2.4.
[41] *Id.*
[42] Cole, *Report on economically-viable mineral resources in the City of Cape Town* (2011), cited in the WULA Socio-Economic Specialist Assessment at p. 13.
[43] See WULA Socio-Economic Specialist Assessment, p. 14, Figure 3.

Spatial Development Framework, which has set the PHA aside for horticultural purposes and the exploitation of silica in the long term.[44]

69. Consol's mining division has already been mining silica sand a few kilometres north of the PHA, adjacent to Hanover Park, since the 1950s. This operation has benefitted the surrounding community through two programmes, namely "A New Venture Creation" that supports unemployed youth with disabilities and "farming learnerships for emerging farmers from disadvantaged backgrounds", and also industries that rely on glass across the South Africa.[45]

70. Benefits from the Philippi Sand Mine include:

70.1. A mining operation with a sustainable LoM (in excess of 30 years);

70.2. A better use of the land that is only partially used for agriculture (16%) due to poor groundwater quality and winter flooding;

70.3. The provision of sustainable employment in the immediate project area, as well as spinoff opportunities for entrepreneurs and local business in the surrounding areas;

70.4. A positive impact on the local economy of the surrounding area due to the operational requirements of the proposed operation;

70.5. A potential economic injection into the region in terms of small business enterprises (e.g., community services);

70.6. The provision of sand suitable for various markets;

70.7. A supply of sand to the local market for a period in excess of 30 years;

70.8. Supply of silica sand for water purification systems;

70.9. Continuation of sand supply to the glass industry;

---

[44] City of Cape Town, "Cape Town Spatial Development Framework: Statutory Report" (2012) and the revised urban edge of the PHA in the City of Cape Town's 2017 Spatial Development Review, 2018 cited in the WULA Socio-Economic Specialist Assessment at p. 19.
[45] Section 27 Motivation Report at p. 17, section 2.3.

70.10. Glass industry inputs into the agricultural, wine and pharmaceutical industries; and

70.11. Continuation of supply to other locally based industries including tile adhesives, foundries, filtration sand, and polymer casting.[46]

71. The WULA Socio-Economic Specialist Assessment details a wide range of socio-economic benefits which will likely be lost if the WUL is not issued:

71.1. Increased job and investor security at the facility due to an approved water use for mining, resulting in continued socio-economic contribution to the area (employment of locals) and employees both on- and offsite. Fifty (50) full time staff and thirty (30) part time staff will have job security at the Philippi Sand Mine. No job loss will occur from the loss of agricultural land to mining as the currently employed parttime farmworkers will be employed on another site within the PHA.

71.2. Additional in-house training and up-skilling of staff for day-to-day operation and maintenance of the groundwater supply.

71.3. A better use of the land that is currently only partially farmed (16%) due to poor groundwater quality and winter flooding.

71.4. Additional economic benefit to local service providers for the maintenance and monitoring of abstraction and mining infrastructure at site, as well as an injection into the economy for small business enterprises. Value-added profits will be well in excess of the R300 000 p/a agricultural value-added currently generated on the site (in the most profitable years), resulting in a positive net impact on the local gross domestic product.

71.5. Support of local businesses when buying goods and services.

71.6. As one of the last remaining high-grade silica sand sources, the Philippi Sand Mine will support the continued operation of the glass sand

[46] WULA Section 27 Motivation Report at p. 17, section 2.3.

industry, with a knock-on effect to the wine (~80% of current sales) and agricultural industry, glass packaging for the food (7% of current sales) and beverage industries (8% of current sales) and pharmaceutical industries (1% of current sales). Silica sand is also used in water purification systems.

71.7. The Glass Recycling Company, a voluntary organisation established by Consol, promotes glass recycling in South Africa, diverting 80% of glass packaging placed into the market from landfill for potential recycling and reuse thereby reducing Keysource's environmental footprint.

71.8. The Company's contribution to Government revenues can be used to improve the social infrastructure and public services.

71.9. Donations to schools for education and/or sponsorship of further study for select locals. Keysource's Social and Labour Plan requires the company to commit to upliftment projects for the local community (and business).

71.10. Keysource's link to Consol will ensure that the two community projects, one for unemployed youth with disabilities called "A New Venture Creation" and the second as "farming learnerships for emerging farmers from disadvantaged backgrounds", can continue in the area.

71.11. The empowerment of women working in glass will continue in the PHA.

71.12. The end of mine land use will serve to benefit the greater area by the creation of an open space recreational park where both local and international individuals can relax and observe nature.

71.13. The creation of an open water body and recreational park area affords Keysource the opportunity to invest in the community post closure by supporting local business and Small, Micro and Medium Enterprises in establishing themselves in the tourism and bird-watching market.

**Ground 2: Lack of formalised wetland offset not a rational or reasonable basis to deny application (s. 27(1)(c), (f) and (g) of the NWA)**

72. The decision-maker erred in refusing the IWULA on the basis of the Resource Protection Unit's recommendation that an alternative location for a biodiversity offset area to maintain ecosystem services should have been identified to recreate the wetland hectarage "that is to be lost" as a result of the proposed activity.

73. As demonstrated below, the Hydrogeological Technical Report submitted in support of the IWULA proposed the development of a formalised wetland offset plan once the WUL is awarded.[47] This approach has been implemented in other cases before and was deemed acceptable at the time of submission. The decision-maker's reasons provide no explanation why this approach was not similarly adopted in the present case.

Wetlands

74. Two highly transformed wetlands (~16.5 ha in size) are located within the PSM boundary-

74.1. Wetland 1, which contains three small natural, but fully transformed, wetlands in the northern portion of the site;[48] and

74.2. Wetland 2, a large, fully transformed wetland in the central portion of the site.[49]

75. For ease of reference, Figure 3-2 of the Hydrogeological Technical Report,[50] depicting the location of the wetlands, is included below:

---

[47] See WULA Hydrogeological Technical Report at p. 100, section 7.3.
[48] Used for grazing cattle for small scale subsistence farming, while the upper and southern sections intersect agricultural land; see WULA Hydrogeological Technical Report at p. 32, para 3.3.3.
[49] Purposed for agriculture (commercial annual crops); doesn't show any areas of inundation, likely because area is being intentionally drained to dry the lands for crop farming; see WULA Hydrogeological Technical Report at p. 32, para 3.3.3.
[50] At p. 33.

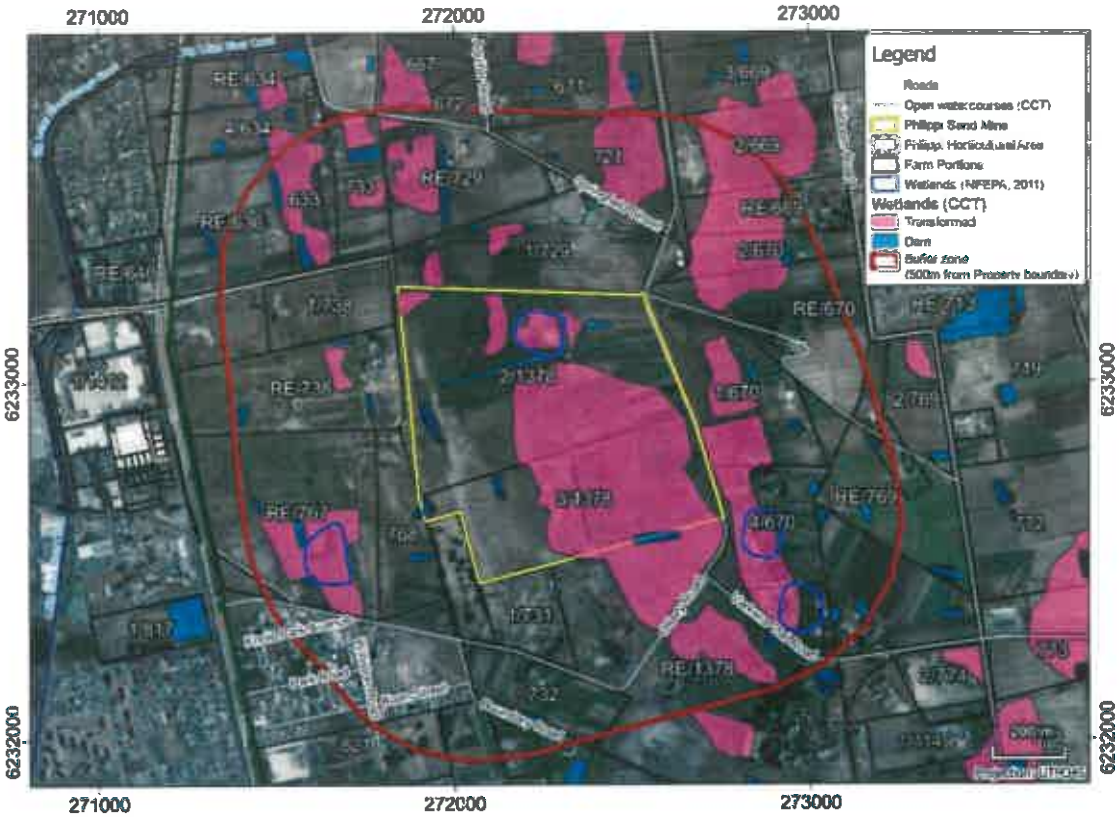


**Figure 3-2 Desktop Assessment of wetlands up to 500 m from the property boundary using the National Freshwater Ecosystem Priority Areas (2011) and City Wetlands (2017) spatial layers. The areas of interest, wetland 1 and 2, are shown by the green polygons.**

76. As detailed in the Freshwater Specialist Assessment, these wetlands are highly transformed, with a PES score[51] of E ("seriously modified").[52] This ecological category means that the "change in ecosystem processes and loss of natural habitat and biota is great, but some remaining natural habitat features are still recognisable".[53]

77. The area, including the wetlands, is currently used for agricultural practices such as crop farming and cattle grazing with limited ecological importance. While the wetlands do host a number of waterfowl species, the impact of the proposed water uses is deemed low. That is so because of the number of surrounding suitable wetlands and the likelihood that these species would return once the mine is rehabilitated through the Mine Closure Plan.[54] In this

[51] "Present Ecological State".
[52] See WULA Freshwater Specialist Assessment at p. 16 – 17, para 3.1.1 and pp. 21 – 29, para 3.2.1.
[53] See WULA Freshwater Specialist Assessment at p. 17, Table 3-2.
[54] See IWULA Summary report at p.14.

regard, the freshwater specialist assessment further concluded that the slow and phased approach of mine development will allow for the movement of animals and insects to these adjacent areas until such time as they can return to the rehabilitated wetland.[55]

78. While the development will cause a temporary net loss of biodiversity through biodiversity movement out of the area, it will ultimately see a return of a more diverse wetland community should such development be authorised on condition that the land be rehabilitated into a wetland that is large and diverse in habitat.[56]

79. It is necessary to point out that the decision-maker's refusal in relation to the identification of a biodiversity offset area also appears to have been premised on the incorrect basis that the water uses "will destroy 55ha of wetlands".[57] As detailed further below, the water uses[58] will result in the loss of the four transformed wetlands on the site, with an extent of ~16.5 ha.[59]

Wetland offset

80. The Freshwater Specialist Assessment calculated the offset areas for the wetlands as follows:

80.1. Wetland 1 –

80.1.1. The final WET-HEALTH PES scores for the relevant components, i.e. hydrology (17% (F)), geomorphology (87% (B)), water quality (56% (D)) and vegetation 24% ((E)), with an overall PES score of 36% (E – seriously modified), translates to a hectare equivalent area of **5.7 ha** out of the 15.6 ha lost that should be offset.[60]

---

[55] *Id.*
[56] *Id.*
[57] See para. 9 of decision.
[58] Impeding flow to, and alteration of, the wetlands by the mine development constitute water uses under s. 21l and 21 (i), respectively; see WULA Hydrogeological Technical Report at pp.1 - 3, par. 1.2.1 – 1.2.2; Table 1-1 (locality information).
[59] See Hydrological Technical Report at p. 8, para 1.5.1 and section 3.6.
[60] See WULA Freshwater Specialist Assessment at p. 37, Table 3-13.

80.1.2. The WET-ECOSERVICES offset calculator determined the present and future supply percent functional value as 21.7% and 25.1%, respectively, which equates to a functional hectare equivalence area of 3.39 and 3.92 ha respectively that should be offset to maintain ecosystem services.[61]

80.2. Wetland 2 –

80.2.1. The final WET-HEALTH PES scores for the relevant components, i.e. hydrology (12% (F)), geomorphology (85% (B)), water quality (17% (F)) and vegetation (0% (F)), with an overall PES score of 23% (E – seriously modified) translates to a hectare equivalent area of 2.6 ha out of the 11.3 ha lost that should be offset.[62]

80.2.2. The WET-ECOSERVICES offset calculator determined the present and future supply percent functional value as 24.9% and 25.1%, respectively, which equates to a functional hectare equivalence area of 2.81 and 2.84 ha respectively that should be offset to maintain ecosystem services.[63]

81. Choosing the more conservative WET-HEALTH PES score, the Freshwater Specialist Assessment recommended the following offsets: **5.7 ha** for Wetland; and **2.81** ha for Wetland 2.

82. It does not appear from the reasons that DWS took issue with this methodology or the calculation of the hectarage of these recommended offsets.

83. As noted under the proposed licence conditions,[64] it was proposed that a formalised wetland offset plan be developed once the WUL is awarded. This approach has been implemented in other cases before and was deemed acceptable at the time of submission.

---

[61] WULA Freshwater Specialist Assessment at p. 32, Table. 3-10.
[62] WULA Freshwater Specialist Assessment at p. 40, Table. 3-14.
[63] WULA Freshwater Specialist Assessment at p. 35, Table. 3-11.
[64] WULA Hydrogeological Technical Report, p. 100, section 7.3.

84. Finally, the Section 27 Motivation Report recorded as follows:

> "Keysource is committed to environmental best practise and is in the process of investigating various wetland offset options, including possible buy-in into a wetland offset area with Working for Wetlands. The goal is for the closure of the mine to form a recreational area consisting of a park, dam, and wetland area that will attract bird species to the area that could lead to a viable eco-tourism potential for bird watchers. This is an on-going process that requires continued consultation between Keysource, Working for Wetlands, the CCT Biodiversity Management Division, and the Department of Water and Sanitation (DWS) before a final decision can be reached."[65]

85. Simply put, there is no rational or reasonable basis why the investigation and finalisation of a suitable wetland offset option could not have been dealt with in licencing conditions regulating the post-authorisation phase.

**Ground 3: The proposed water uses do not constitute any unacceptable risk to Zeekoevlei (s. 27(1)(c), (f) and (g) of the NWA)**

86. Potential impacts on Zeekoevlei, in particular, underpinned paragraphs 2 and 4 of the "reasons" for refusal, albeit that they state mere conclusions and lack the specificity required under section 5 of PAJA.

87. In any event, the reports submitted in support of the WULA demonstrate that the proposed water uses do not pose any unacceptable risk to Zeekoevlei.

88. The general groundwater flow direction for the CFA is from the northeast near Durbanville, towards Table Bay to the northwest and the False Bay coast to the south. However, due to extensive abstraction from the CFA within the PHA, a drawdown cone is observed. This has created a reversal of groundwater flow within the PHA.[66]

89. The Minerals Modelling Report illustrates how the groundwater flow direction within the PHA (in the vicinity of the PSM) is towards the southeast and not southwest, where Zeekoevlei is situated. This is further supported by the plume migration results from the Minerals Modelling Report, where a modelled potential plume does not migrate far off-site as it follows the local groundwater

---

[65] At p. 26, section 2.6.
[66] WULA Keysource Groundwater Modelling Report prepared by Umvoto dated January 2023 ('*WULA Groundwater Modelling Report*') at p.11, section 2.4.3.

depression. Accordingly, there is no impact to the water quality at Zeekoevlei or other sensitive conservation areas.

90. The Public Participation Report underscored that this application used up-to date water level monitoring data[67] and explained the implication of the reversal in the groundwater flow within the PHA as follows:

90.1. The monitoring data indicates that abstraction within the PHA has created a drawdown cone, which means that any plume created by the mine would move towards this drawdown cone and not follow the regional groundwater gradient towards the southwest and Zeekoevlei.

90.2. The latest water level data is included in the predications shown in the Groundwater Modelling Report, which indicate that if no mitigation measures are put in place, the plume would move southeast and be captured by either the City's Augmentation boreholes or neighbouring farmers.

90.3. However, with the proposed mitigation measures in place, no plume would form and therefore there would be no impact to the City's boreholes or neighbouring farmers.

90.4. Recent groundwater level monitoring indicates that the groundwater gradient within the PHA differs from the regional gradient due to the drawdown cone created by large-scale abstraction. The result of this drawdown cone is that any potential contamination plume from the mine would flow to the SE instead of to the SW (Zeekoevlei).[68]

91. In addition, the potential biodiversity impacts of the Philippi Sand Mine on the receiving environment (including Zeekoevlei), along with the adequacy and acceptability of relevant mitigation measures, were considered in the EIA process which culminated in the issuing of the EA.

---

[67] Gathered from 2018 to current.
[68] WULA Groundwater Modelling Report at p. 21, section 3.5.1.

**Ground 4: The proposed water uses will not result in unacceptable negative impacts on bird species observed within the 1km² receiving environment, also taking into account the connection to Zeekoevlei, Rondevlei and the greater False Bay area (s. 27(1)(c), (d), (f) and (g) of the NWA)**

92. This "reason" fails to provide any explanation for the refusal of the WULA.

93. The likely impact of the proposed mining activities on bird species at the mine site and the receiving environment, as well as the adequacy and acceptability of proposed mitigation measures were assessed in the EIA process, which culminated in the approval of the EMPR and the granting of an EA.

94. Moreover, the Freshwater Specialist Assessment concluded as follows as to the likely impact of the water uses on bird species:

94.1. The Philippi Sand Mine development could potentially benefit this area in terms of wetland health and ecoservices functioning should the area be adequately rehabilitated, post mine closure.

94.2. Given the proximity of other wetland areas within the immediate vicinity, it is expected that the slow and phased approach of mine development will allow for the movement of animals and insects to these adjacent areas until such time as they can return to the rehabilitated wetland.

94.3. The development will cause a temporary net loss of biodiversity, through biodiversity movement out of the area, but ultimately will see a return of a more diverse wetland community should such development be awarded on condition that the land be rehabilitated into a wetland that is large and diverse in habitat.

95. Finally, it should be noted that the approach to rehabilitation of the site was discussed with and is supported by the Biodiversity Branch of the City of Cape Town.

**Ground 5: The proposed water uses do not pose an unacceptable stormwater risk to nearby wetlands, including Zeekoevlei (ss. 27(1)(c), (f), (g) and (j) of the NWA)**

96. For reasons already dealt with under appeal ground 3, the water uses will not result in any unacceptable stormwater impacts on nearby wetlands, including Zeekoevlei.

97. It was proposed that a formalised and detailed stormwater management plan be developed for the mine once the WUL is awarded. In this regard, the Hydrogeological Technical Report set out Keysource's relevant water and waste management philosophy and strategy to ensure appropriate water and waste management,[69] the details of its proposed stormwater management plan,[70] as well as the integrated water and waste management plan.[71]

98. This report further demonstrates that-

98.1. The best practice stormwater principles will be applied at the Philippi Sand Mine by managing areas of clean and dirty water. Clean water areas will be separated from the dirty water areas using a series of berms and channels and by diverting dirty water around clean water areas into a PCD. At the Pollution Control Dams, all dirty water will be managed accordingly either by re-use in the dirty system or treatment before the water is recirculated into the ponds.

98.2. There are no surface water bodies which may drain onto the Philippi Sand Mine area. The dams/ponds created during mining at the Philippi Sand Mine will likely trap all water that falls or flows from any process plant. The water will be abstracted and recirculated into these dams/ponds. Runoff from roofs and roads will be diverted via gutters or channels into the constructed dams. Due to the construction of berms and channels around surface water bodies or diverting runoff to these

[69] At p. 77, Table 5-1.
[70] At p. 78, section 5.2.
[71] At p. 85, section 5.3.

surface water bodies, the possibility of surface water leaving the Philippi Sand Mine is low.

98.3. Keysource will adopt a no-discharge policy, unless emergency discharge is required, which will ensure that all process water on the mine property will remain within the mining area.

98.4. There is accordingly no threat of stormwater runoff on the nearby wetlands, including Zeekoevlei.

99. The stormwater infrastructure will be constructed during the construction phase of the mine, in accordance with the formalised stormwater management plan as described above.

100. DWS' reasons fail to provide any basis upon which the conclusions of the Hydrogeological Technical Report can be called into question.

**Ground 6: The proposed water uses will not result in an irreversible loss of dune slack wetlands (ss. 27(1)(c), (f), (g) and (j) of the NWA)**

101. The highly transformed nature of the wetlands within the Philippi Sand Mine' boundary and the partial loss of these wetlands have already been dealt at paragraphs 74 - 80 above.

102. The wetlands are classified as *depression wetlands*, which overlay a flat area outside of the Cape Flats dunal system. This is depicted in Figure 1 of the Freshwater Specialist Assessment Report, which is included below for ease of reference.

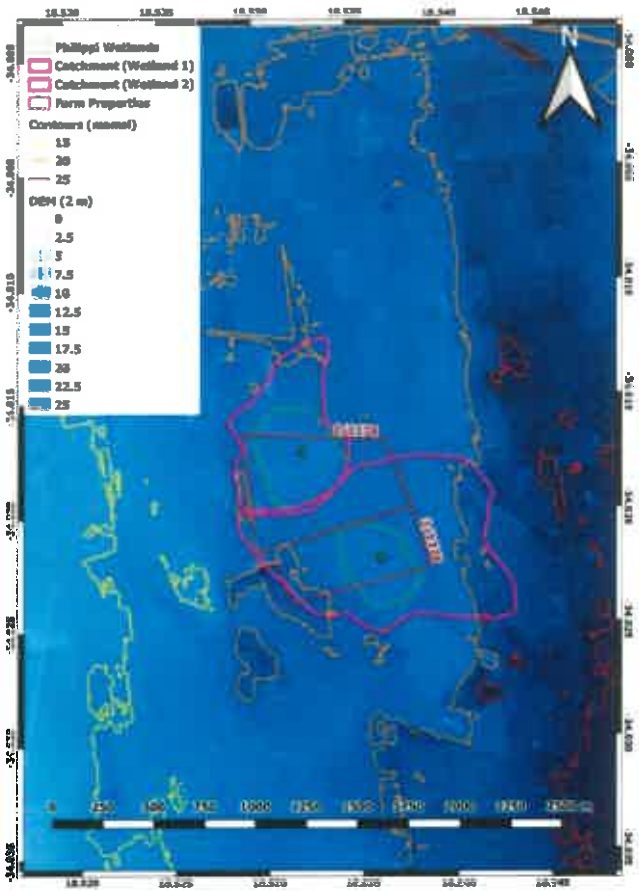


**Figure 1 Elevational layout of Wetlands 1 and 2 and their catchments against the immediate surrounds using a 2 m DEM and 5 m contours. The wetlands overlay a flat area outside of the Cape Flats dunal system and the elevation decreases from 20 mamsl east of the wetlands (orange line) to 15 m west of the wetlands (yellow line) over a distance of 1650 m, giving a slope of 0.2 %. The 2m DEM further supports the classification of depression wetland HGM types due to the topographic lows these wetlands are located in, compared to the surrounding area.**

103. The Freshwater Specialist Assessment further concludes that, due to modification of the area and the removal of the dunes for farming practices, the wetlands are no longer typical dune slack wetlands. Rather, the surrounding catchment is flat; not dunal.

**Ground 7: The absence of a faunal report does not constitute a material knowledge gap, which could warrant refusal of the IWULA (ss. 27(1)(c), (f), (g) and (j) of the NWA)**

104. Significantly, DWS did not include a faunal report in the list of required reports for the IWULA or request such a report in any meetings with the case officer. In any event, the mine has already been awarded a mining right, including an

environmental authorisation, which provides mitigation measures which adequately address any adverse faunal impacts.

105. Moreover, the *Public Participation Report* indicates that no objections were submitted or requests for a faunal report received from the City of Cape Town's Biodiversity Management Branch (*'BMD'*) either in the meeting held on 28 September 2022 or when the technical reports were submitted for comment.

106. The Philippi Sand Mine development could potentially benefit this area in terms of wetland health and ecoservices functioning should the area be adequately rehabilitated, post mine closure.

107. It is acknowledged that amphibians such as the near threatened Flat Caco and endangered Western Leopard Toad have been sighted in the PHA, as well as other waterfowl. However, these amphibians have not been sighted on the property of the Philippi Sand Mine.

108. As already detailed elsewhere, the Freshwater Specialist Assessment concluded that –

108.1. The slow and phased approach of mine development would likely allow for the movement of animals and insects to the adjacent wetland areas, until such time as they can return to the rehabilitated wetland.

108.2. While the development will cause a temporary net loss of biodiversity, through biodiversity movement out of the area, it will ultimately see a return of a more diverse wetland community should such development be awarded on condition that the land be rehabilitated into a wetland that is large and diverse in habitat.

**Ground 8: The water uses will not result in an unacceptable adverse impact on the Western Leopard Toad (ss. 27(1)(c), (f), (g) and (j) of the NWA)**

109. It is submitted that there is no rational or reasonable basis to conclude that the proposed water uses will likely result in an unacceptable adverse impact on the Western Leopard Toad. The factual underpinning for this submission has already been dealt with at paragraphs 104 - 108 above.

**Ground 9: The proposed water uses will not result in the destruction of 55ha of wetlands or have an unacceptable impact on the aquifer recharge of the CFA (ss. 27(1)(c), (f), (g) and (j) of the NWA)**

110. As already detailed at paragraphs 74 - 80 above, the wetlands within the Philippi Sand Mine boundary are highly transformed and the water uses will result in the loss of the four transformed wetlands on the site, with an extent of ~16.5 ha. For reasons that are not clear, the decision-maker has cited the total size of the Philippi Sand Mine site (55 ha), with the current full extent of wetlands 1 and 2 being 15.6 ha and 11.3 ha, respectively.

111. In addition, the Philippi Sand Mine development will entail the construction of surface water ponds (dredge ponds), which will be filled with daylighting groundwater, i.e., connected to the underlying CFA. This would facilitate recharge to the aquifer.

112. To reduce evaporation from these surface water ponds, portions of the surface water ponds will be covered by a combination of solar panels, indigenous aquatic plants, and floating plant islands. Pursuant to concerns expressed by the City's Biodiversity Management Branch,[72] the WULA proposes that this mitigation measure be implemented in consultation with them.

113. Finally, there is no surface runoff from the area. Keysource will adopt a no-discharge policy, which means that all water will remain on site. As such, any recharge from natural rainfall will continue to recharge the underlying CFA.

**Ground 10: The lack of "support" from the Philippi Horticultural Area ('PHA') campaign does not provide a rational or reasonable basis to refuse the IWULA (s. 27(1)(c) and (d) of the NWA)**

114. The concerns of the PHA campaign and other I&APs are addressed in the Public Participation Report. As noted in this report, a number of concerns and queries raised by the PHA Campaign are not part of the consideration for a WULA, but instead were already addressed as part of the EIA and Mining Right

[72] *Viz.* that covering too great a surface area of the waterbody may result in reduced organic activity in the ponds.

which was awarded in 2019.[73] For example, a Food Security Impact Assessment and Use of Land Assessment are not requirements of a WULA;[74]

115. As is required, changes to land use or the loss of farming land have already been addressed through extensive specialist studies and public participation in the EIA and Mining Right application process.

116. Finally, the WULA Socio-Economic Specialist Assessment and the farmer who currently leases the land confirm that only 8 ha (16%) of the 55-ha site can be farmed due to flooding in winter and poor water quality, indicating that silica mining may be a better use of the land from a socio-economic perspective.

**Ground 11: The absence of an operational stormwater plan does not provide a rational or reasonable basis to refuse the IWULA (ss. 27(1)(c), (f), (g) and (j) of the NWA)**

117. As per the proposed WUL Conditions listed in Section 7.3 of the Hydrogeological Technical Report, it is proposed that a formalised stormwater management plan be developed for the mine within one month of the WUL being awarded.

118. The proposed stormwater management plan as well as the integrated water and waste management plan are detailed in section 5 of this report. Relevant aspects of the plan have already been dealt with at paragraph 98 above.

119. As stated in section 5.2 of the Stormwater Plan in the Hydrogeological Technical Report, the mine stormwater management plan will consider the following mine stormwater management guideline documents:

119.1. Department of Water Affairs and Forestry (DWAF) Government Notice No. 704 (GN704): Guideline Document for the Implementation of Regulations on use of Water for Mining and Related Activities Aimed at the Protection of Water Resources.

119.2. The following DWAF Best Practice Guidelines (BPGs):

---

[73] See PP Report at pp. 8 – 30.
[74] PP Report at p. 21.

119.2.1. G1 - Storm Water Management;

119.2.2. A4 - Pollution Control Dams; and

119.2.3. A5 - Water Management for Surface Mines.

**Ground 12: The absence of a <u>formal</u> process flow diagram does not provide a rational or reasonable basis to refuse the IWULA (ss. 27(1)(c), (f), (g) and (j) of the NWA)**

120. No formal process flow diagram was requested by the DWS.

121. However, all the information which DWS reasonably requires in respect of potential water losses is provided in the Hydrogeological Technical Report. In this regard, I refer to Figure 1, which indicates the layout of the PSM and the Water Balance Report, which details the amount of water and losses.

**Table 1 Water balance summary for the PSM. Negative net water balance indicating a water loss.**

| Keysource Water Balance Summary | | | |
|---|---|---|---|
| Water Uses | Abstracted ($m^3/a$) | Returned to source | Loss ($m^3/a$) |
| Processing water | 6,755,000 | | |
| Dredging silica sand and groundwater | 6,750,000 | | |
| Recirculated groundwater from dredging & processing | | 13,490,900 | |
| Dust suppression | | | 5,000 |
| Moisture in sand | | | 9,100 |
| Total | 13,505,000 | 13,490,900 | 14,100 |
| Net Water Balance | | - 14,100 | |


**Figure 2** **Preliminary layout of the Keysource silica sand mine.**

## CONCLUSION

122. For these reasons, it is submitted that the WUL should be issued subject to the proposed licensing conditions or on such conditions as the Tribunal deems appropriate.

# Annexure "A"

**From:** Mkhungela Mbulelo (BVL) <MkhungelaM@dws.gov.za>
**Sent:** Tuesday, August 15, 2023 9:34 AM
**To:** Holomisa, Fikile <Fikile.Holomisa@ardaghgroup.com>
**Cc:** Kweza Vuyokazi(BVL) <KwezaV@dws.gov.za>
**Subject:** FW: Keysource Minerals (Pty) Ltd. Integrated Water Use License for proposed Sand Mine in Philippi (WU20103)



Dear Fikile,

Your Water Use Licence Application (WU20103) has reference.

Attached herewith decision letter from the Department in respect of water use licence application.

Regards,

**Mbulelo Mkhungela**

Proto-CMA Berg Olifants
Tel: 021 941 6169
Email: MkhungelaM@dws.gov.za
Web: www.dws.gov.za

water & sanitation
Department:
Water and Sanitation
REPUBLIC OF SOUTH AFRICA

Private Bag X313, Pretoria, 0001 Sedibeng Building, 185 Francis Baard, Pretoria
Tel: (012) 336 7500, Fax: (012) 323 4472 / (012) 326 2715

✍: Mr T .Khosa
☎: (012) 336 7496
: 27/2/2/G422/75/1

**Keysource Minerals (Pty) Ltd.**
Consol House
Osbourn Rd,
WADEVILLE
1422

Attention: Mr. FFH Holomisa

**APPLICATION FOR A WATER USE LICENCE IN TERMS OF SECTION 40 OF THE NATIONAL WATER ACT, 1998 (ACT NO. 36 OF 1998): FOR THE THE SILICA SAND THAT IS PROPOSED TO BE MINED IN PHILLIPI AND WILL BE USED FOR THE MANUFACTURING OF GLASS BY CONSOL.**

The above mentioned application has been received and processed by this Department and forwarded to me for a decision.

Kindly be informed that your application is unsuccessful because of the following reasons.

1. This Resource Protection unit recommends that an alternative location must have been identified where the wetland hectarage that is to be lost due to the proposed activity can be re-created as an offset, so that the ecosystem services can be maintained.
2. One of the significant habitats recognized by the City of Cape Town is the Zeekoevlei, a RAMSAR site that is close by the proposed activity.
3. The proposed mining area is part of a 1km square area with reported sighting of 98 bird species with the predominance of flamingos and other water birds. This area is connected to Zeekoevlei, Rondevlei and the greater False Bay conservation area.
4. Given that the Zeekoevlei is currently very much intact and has a very high biodiversity richness, the loss of habitat and species variety related to the type of wetlands and vegetation is considered to be a high risk.
5. The increased impacts of stormwater runoff on the nearby wetlands, including Zeekoevlei, may have a detrimental impact on the water quality that reaches the watercourses connected to Zeekoevlei.

6. Since dune slack wetlands are a delicate ecological habitat, their loss is irreversible as it supports habitat to various floral and faunal communities.
7. No information was provided regarding a faunal report that would have addressed the existence of any large predator bird species or the Western Cape Leopard Toad species, a species classified as endangered.
8. The Western Leopard Toad (Ametophrynus pantherinus), an amphibian species that is only found in a very small area of the Western Cape, from the Cape Town Peninsula eastward to the westernmost part of Agulhas National Park, is confirmed to be an endangered species by external documents referred in this application.
9. This application will destroy 55ha of wetlands, these four wetlands recharge the aquifer in winter months.
10. The Philippi Horticultural Area (PHA) campaign as an IAP did not support this mining activity as such activities will have a significant impact on the PHA environment and heritage, the Cape Flats Aquifer, the surrounding community and especially the food and water security of the greater CCT.
11. An operational manual on how the stormwater will be managed and how the requirements of Government Notice 704 (Government Notice 20119 of June 1999) was not submitted.

A process flow diagram of the water to include; the source, retention dam(s), processing flat, process control dam (PCD) and return to source indicating the amount of water and losses at each control point as well as any process waste generated was not submitted with this application

However, in terms of Section 148 (1) (f) of the National Water Act, 1998 (Act No. 36 of 1998) an appeal against the above decision can be lodged with the Water Tribunal within thirty (30) days.

The Water Tribunal can be reached at the following contact details:

The Acting Registrar of the Water Tribunal: Mr Luyanda Xuba
Telephone: (012) 336 8168
E-mail: XubaL@dws.gov.za

Postal Address:

Water Tribunal
Private Bag X316
**PRETORIA**
0001

Physical Address:

Room 322
Waterbron Building
191 Francis Baard Street
**PRETORIA**
0001

Please note that any use of water without authorization is illegal as it is in contravention of the National Water Act, 1998 (Act No. 36 of 1998) and is punishable by law.

**Approved**

Comments:

I, Mrs NM Bila-Mupariwa (Provincial Head: Western Cape) herewith electronically sign this document.
Serial Number : 5708090634367384965
**Provincial Head: Western Cape**
Date: Aug 9 2023 11:36PM