

## HERITAGE IMPACT ASSESSMENT

### PROPOSED DEVELOPMENT OF THE HARMONY INSTREAM DAM AND ASSOCIATED AGRICULTURAL AREA ON THE REMAINDER OF FARMS HOUDENBEK NO. 415 AND WINKELHAAK NO. 224, NEAR CERES, WITZENBERG LOCAL MUNICIPALITY

Assessment conducted under Section 38 (3) of the National Heritage Resource Act (No. 25  
of 1999)

*HWC Case 24082111*

Prepared for

**EnviroAfrica cc**

PO Box 5367, Helderberg, 7135

[lian@enviroafrica.co.za](mailto:lian@enviroafrica.co.za)

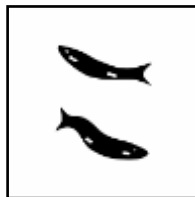
Applicant

**Harmony Trust**

PO Box 20, Koue Bokkeveld, 6836

[hein@harmonytrust.co.za](mailto:hein@harmonytrust.co.za)

By



Jonathan Kaplan

Agency for Cultural Resource Management

5 Stuart Road, Rondebosch, 7700

[jonathan@acrm.co.za](mailto:jonathan@acrm.co.za)

**OCTOBER  
2024<sup>1</sup>**

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<sup>1</sup> Amended, July 2026

## Declaration of Independence

### **PROPOSED DEVELOPMENT OF THE HARMONY INSTREAM DAM AND ASSOCIATED AGRICULTURAL AREA ON THE REMAINDER OF FARMS HOUDENBEK NO. 415 AND WINKELHAAK NO. 224, NEAR CERES, WITZENBERG LOCAL MUNICIPALITY**

HWC CASE 24082111

This report has been compiled by Jonathan Kaplan, Director of the Agency for Cultural Resource Management, an independent Heritage Practitioner registered with the Association of Southern African Professional Archaeologists (ASAPA), CRM Membership No. 64.

The views expressed in this report are entirely those of the author and no other interest was displayed during the decision-making process for the Project.

I further declare that I: **Jonathan Kaplan**

- act/ed as the independent specialist in the compilation of the above report.
- regard the information contained in this report as it relates to my specialist input/study to be true and correct, and
- do not have and will not have any financial interest in the undertaking of the activity, other than remuneration for work performed in terms of the NEMA, the Environmental Impact Assessment Regulations, 2014 and any specific environmental management Act.
- have and will not have any personal stake in the proposed activity proceeding.
- have disclosed to the EAP any material information that has or may have the potential to influence the decision of the competent authority or the objectivity of any report, plan or document required in terms of the NEMA, the Environmental Impact Assessment Regulations, 2014 and any specific environmental management act.
- have provided the EAP with access to all information at my disposal regarding the application, whether such information is favourable to the applicant or not; and
- am aware that a false declaration is an offence in terms of regulation 48 of the 2014 NEMA EIA Regulations.



Signature of the specialist

Date: 16 July 2026

HIA New Harmony Instream Dam & Agricultural Area on Farm Houdenbek 415 & Winkelhaak 224,  
near Ceres

Executive summary

*1. Name of site*

Proposed Development of the Harmony Instream Dam and Associated Agricultural Area on the Remainder of Farms Houdenbek No. 415 & Winkelhaak No. 224, Ceres, Witzenberg Local Municipality.

*2. Site location*

± 12kms east of Op Die Berg, near Ceres (Figures 1 & 2)

*3. GPS Co-ordinates*

S 33° 0'2.01" E 19°28'29.97"



Figure 1. Google Earth Locality Map. Yellow pin shows the location of the Study Site near Ceres



Figure 2. Google Earth satellite map of the proposed Harmony Instream Dam (blue polygon) & proposed agricultural area on Re of Farm Houdenbek 415 (orange polygon) and Winkelhaak 224 (red polygon) in the Koue Bokkeveld region of the Western Cape.

### 3. The development proposal

The proposed development (an empowerment project) entails construction of the new Harmony Instream Dam with a storage capacity of 250 000m<sup>3</sup>, a dam wall height of  $\pm 13$ m, and a dam wall length of  $\pm 280$ m. The estimated inundation area of the dam will be  $\pm 5.4$ ha on the lower slopes of the Houdenbeks Mountains (Figure 3). The dam will mainly be supplied with water from runoff from the surrounding catchment area, an unnamed tributary to the Houdenbek River upstream of the confluence with the Riet River. It is proposed that during dry years water will be pumped from the (proposed) new Toeka Dam on Farm 415 to the new Harmony Dam. Winter surplus water will be the primary source for the new dam. The dam will be constructed, to mainly store and supply water for irrigation purposes associated with a proposed  $\pm 30$ ha agricultural expansion area on Re Farm Houdenbek 415 located alongside a gravel farm road. Water will be conveyed via a pipeline from the new dam to an existing pipeline. Irrigation pipelines will be located in ploughed land and in road reserves. Irrigation pipelines thresholds will not trigger Listed Activities in terms of NEMA. The proposed development will complement the surrounding, landuse which is agriculture.

Important note: A preferred, alternative agricultural area comprising old farmland on Re of Farm Winkelhaak 224 has been included in the development proposal<sup>2</sup>. The proposed new landholdings, measuring 25ha in extent, located alongside Re Farm 415 proposed agricultural

<sup>2</sup> Final Scoping Report & Plan of Study, the Proposed Development of the Harmony Instream Dam & Associated agriculture on Re of Farm Houdenbek No. 415 and Winkelhaak No. 224 near Op Die Berg, Witzenberg Local Municipality Cape. Report prepared for Harmony Trust. Enviroafrica, Cape Town, April 2026.

expansion area, have not been assessed by the CRM practitioner. Indications, however, are that the highly transformed agricultural lands are not a sensitive archaeological landscape.



Figure 3. Close up Google Earth satellite map of the proposed new Harmony Instream Dam (blue polygon) and proposed agricultural area on Re Farm Houdenbek 415 and Winkelhaak 225 (preferred).

A Heritage Impact Assessment (HIA) comprising an Archaeological Impact Assessment (AIA), and a Palaeontological Impact Assessment (PIA) was requested by Heritage Western Cape (HWC) following the submission of a Notice of Intent to Develop (NID).

ACRM was appointed by the applicant (Harmony Trust) to conduct the AIA and to write up the integrated HIA, which includes comments from the Wizenberg Local Municipality, registered conservation bodies and Interested and Affected Parties (I&APs).

The PIA has been conducted by consulting palaeontologist Professor Marion Bamford.

EnviroAfrica cc is the independent Environmental Assessment Practitioner (EAP) responsible for facilitating environmental authorisation for the project.

An Environmental Basic Assessment (BA) process will be followed in the application

#### *4. Aim of the study*

The overall purpose of the study is to assess the sensitivity of archaeological and palaeontological heritage resources in the proposed development site and to determine the potential impacts (of the development) on such resources.

#### *5. Constraints and limitations*

There were no constraints or any limitations associated with the study.

## 6. Assumptions

It is assumed that all project information, including, maps, drawings, description of activities and KMZ files distributed to specialists are accurate and up to date.

## 6. Results

### 6.1 Archaeological Impact Assessment

#### 6.1.1 Harmony Dam

A rock art site (HMY1 & HMY2) was recorded by ACRM (Kaplan 2018) during an AIA for the proposed Harmony Dam, in 2018 (HWC Case 1809305AS0904E). Large numbers of Later Stone Age (LSA) flake tools, including bladelet and cylindrical cores, adzes, scrapers, pottery and ostrich eggshell were recorded on alluvial sands in front of the 120m long sandstone shelter. HMY1 and HMY2 were graded as having High (IIIA) local archaeological significance because of the well-preserved condition of the art, which included paintings of human figures, antelope, and symbolic images such as rain animals, formlings, entoptics and geometric shapes. With kind permission of the landowner Harmony 1 and Harmony 2 were recorded in detail by the Eastern Cederberg Rock Art Group (eCRAG) in 2019, where the full record can be found on <https://sahris.org.za/node/87929>.

A 40-50m 'No-Go' buffer around the site was proposed by CTS Heritage (Lavin 2018) as this would allow for the protection of the paintings as well as the archaeological deposits within the rocky overhang, resulting from inundation of the new dam.

#### 2024 Study

A field assessment of the footprint area of the new Harmony Instream Dam, and the proposed 30ha agricultural area on Re Farm 415, was conducted by ACRM in August 2024, in which the following heritage resources were recorded.

An Early Stone Age quartzite flake was recorded in the sandy river bank of the small tributary of the Houdenbek River, close to the new dam wall. The river bank has been severely eroded and cut back as a result of the recent heavy rains in the area (in July). A few isolated LSA flakes and chunks in quartz were also found on the sandy soils next to the proposed new dam wall.

A low density scatter of LSA flakes in silcrete, indurated shale, and quartz including a Middle Stone Age silcrete flake were recorded on a grassy sward in front of a small sandstone outcrop, about 40m from the proposed new dam wall. No rock paintings were found. The site was previously recorded as HMY3 (Kaplan 2018). The remains were graded as having Low (Grade IIIC) archaeological significance. The site will not be impacted by construction excavations for the new dam.

#### 6.1.2 Re Farm 415 Agricultural Area

No Stone Age archaeological heritage resources were recorded in the proposed 30ha agricultural area on Re Farm 415 Houdenbek.

#### 6.1.3 Re Farm 224 Agricultural Area

As indicated the preferred 25ha agricultural area on Re Farm 224 Winkelhaak was not assessed by the CRM practitioner. The proposed new site has been severely transformed by

historical agriculture and all indications are that the site is not a sensitive archaeological landscape.

## *6.2 Palaeontology*

According to Bamford (2024), the proposed Harmony Instream Dam and new agricultural area 'lie on the moderately sensitive Quaternary sands and the potentially very highly sensitive Ceres Subgroup, although no fossils have been recorded from this area'.

Bamford (2024:2) notes that 'there is a very small chance that fossils may occur below the ground surface in the unweathered sandstones and quartzites of the Devonian-aged Ceres Subgroup (Bokkeveld Group, Cape Supergroup)'.

On the SAHRIS palaeo-sensitivity map, the Project Area is indicated as very highly sensitive, but according to Bamford (2024), 'it is already disturbed by previous and present farming activities and is covered with soils. The delicate fossil shells and traces are not likely to have survived the surface weathering or vegetation. It is (therefore) unlikely that any fossils occur on the land surface, but they may occur below the soils in unweathered rocks'.

## *6.3 Graves*

No graves were recorded in the footprint of the proposed alternative agricultural area on Farm 415 during the site visit conducted in August 2024.

## *6.3. Built Environment*

An abandoned farm labourer's cottage on the edge of the proposed alternative agricultural area on Re Farm 415 may need to be demolished. While the structure is likely older than 60 years, the cottage has been severely altered and has no intrinsic vernacular heritage significance.

## *6.4 Cultural Landscape*

The Cultural Landscape is dominated by agriculture (vegetable, fruit farming & grazing), including farm roads, farm buildings, farm sheds and equipment. A wilderness quality (mountains) and the nearby meandering Houdenbek River complements the 'Sense of Place'.

## *7. Anticipated impacts*

### *7.1 Archaeology*

A 50m 'No-Go' buffer around HMY1 and HMY2 is designed to protect the shelter and associated rock art and archaeological deposits from future flooding of the dam. The paintings have been recorded by eCRAG, as part of mitigation action.

No impacts on archaeological heritage resources are anticipated in both proposed agricultural areas (Re Farm 414 & Re Farm 224).

### *7.2 Palaeontology*

According to Bamford (2024), 'there is a very small chance that fossils may occur below the ground surface in the unweathered sandstones and quartzites of the Devonian-aged Ceres Subgroup (Bokkeveld Group, Cape Supergroup)'.

## *8. Comments*

No heritage related comments were received from the Witzenberg Local Municipality and Interested and affected parties. There are no registered Heritage Conservation bodies in the surrounding area.

## *9. Conclusion*

Proposed construction of the new Harmony Instream Dam and development of new agricultural areas on Re Farm 415 Houdenbek, and Re Farm Winkelhaak 224 is not expected to impact on important archaeological heritage resources.

As far as the palaeontology is concerned, 'the impact on palaeontological heritage would be low, so the project should be authorised' (Bamford 2024).

## *10. Recommendations*

### *10.1 Archaeology*

1. The Rock Art Guide document developed by CTS Heritage (Appendix B) must be included in the EMPr for the Construction Phase of the project and all construction and farm staff be informed of its contents.

2. As per the recommendation made by CTS Heritage (2018), a Heritage Agreement in terms of Section 42 of the NHRA must be signed between the landowner and Heritage Western Cape to ensure that the rock art sites, HMY 1 and HMY 2 are protected and conserved.

### *10.2 Palaeontology*

1. The Fossil Chance Find Protocol should be added to the EMPr (Bamford 2024). If fossils are found by the environmental control officer, or other responsible person once excavations for the dam wall or ploughing of the fields have commenced then HWC must be notified, the fossils should be rescued, and a palaeontologist called to assess and collect a representative sample.

## *11. Authors notes*

Kaplan, J. 2026. Proposed Development of the Harmony Instream Dam and Associated Agricultural Area on the Remainder of Farms Houdenbek No. 415 & Winkelhaak No. 224, Ceres, Witzenberg Local Municipality, Western Cape. Report prepared for EnviroAfrica. ACRM, Cape Town.

Bamford, M. 2024. Palaeontological Impact Assessment for the proposed development of the Harmony instream dam and associated agricultural area on the Remainder of Farm Houdenbek 415 (Morester Landgoed), Ceres, Western Cape Province. Phase 1 Desktop Study

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## 1. INTRODUCTION

ACRM was instructed by EnviroAfrica on behalf of the Harmony Trust, to conduct a Heritage Impact Assessment (HIA) for the proposed development of the new Harmony Instream Dam and associated agricultural area on the Remainder of Farm Houdenbek No. 415, near Ceres, Witzenberg Municipality, in the Kou Bokkeveld region of the Western Cape (Figures 1 & 2).

A HIA comprising an Archaeological Impact Assessment (AIA), and a Palaeontological Impact Assessment (PIA) was requested by Heritage Western Cape (HWC) following the submission of a Notice of Intent to Develop (NID). ACRM was appointed conduct the AIA and to write up the integrated HIA, which includes comments from the Witzenberg Local Municipality, registered conservation bodies and Interested and Affected Parties (I&APs). A PIA has been conducted by consulting palaeontologist Professor Marion Bamford (Appendix A).

EnviroAfrica is the environmental assessment practitioner responsible for facilitating environmental authorisation for the project. An Environmental Basic Assessment (BA) process will be followed in this application

Important note: A preferred, alternative agricultural area comprising old farmland on Re of Farm Winkelhaak 224 has been included in the development proposal<sup>3</sup>. The proposed new landholdings, measuring 25ha in extent, located alongside Re Farm 415 proposed agricultural expansion area, have not been assessed by the CRM practitioner. Indications, however, are that the highly transformed agricultural lands are not a sensitive archaeological landscape

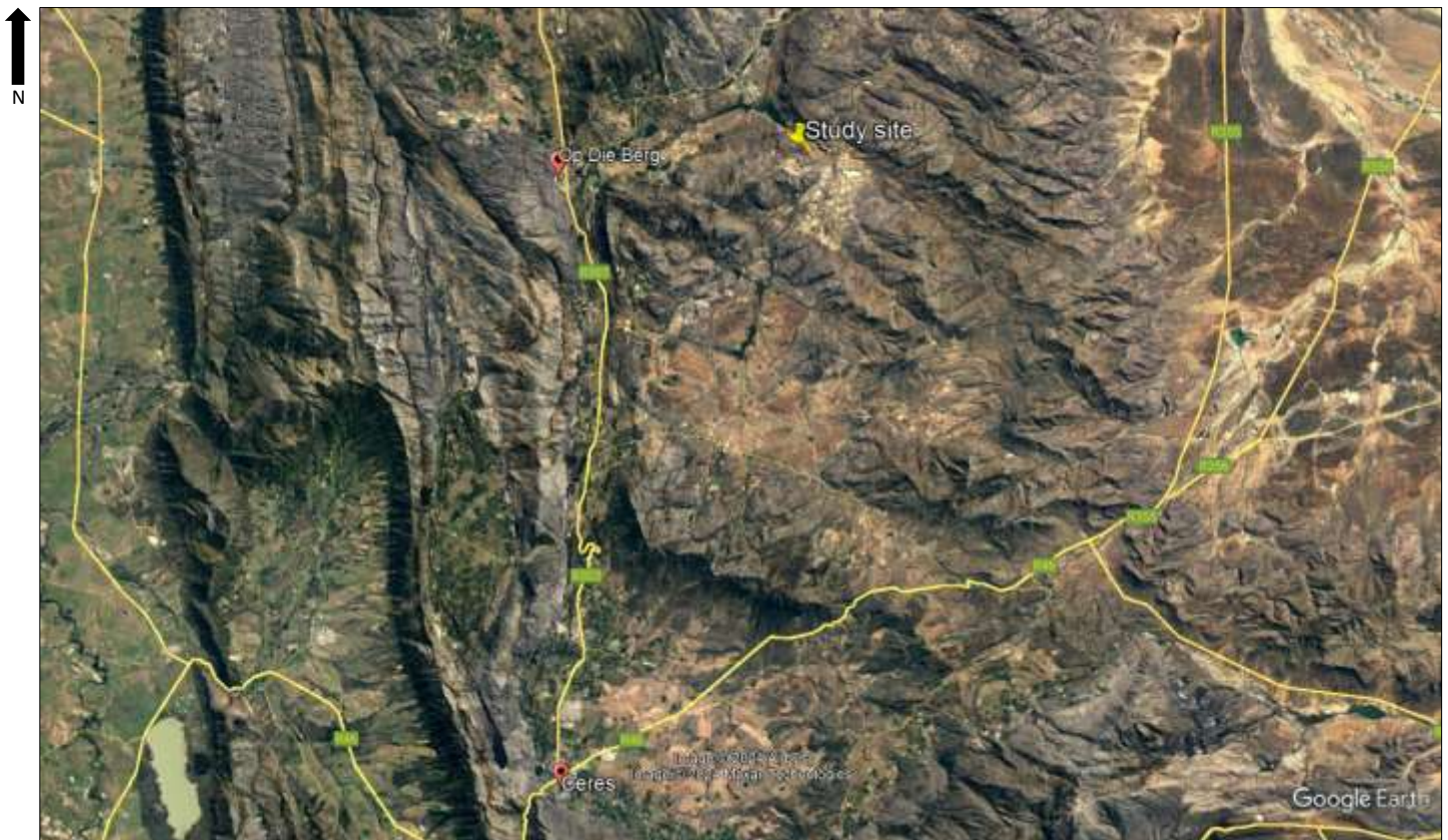


Figure 1. Google Earth Locality Map. Yellow pin shows the location of the Study Site near Ceres

<sup>3</sup> Final Scoping Report & Plan of Study, the Proposed Development of the Harmony Instream Dam & Associated agriculture on Re of Farm Houdenbek No. 415 and Winkelhaak No. 224 near Op Die Berg, Witzenberg Local Municipality Cape. Report prepared for Harmony Trust. Enviroafrica, Cape Town, April 2026.



Figure 2. Google Earth Satellite Map of the proposed new Harmony Instream Dam (blue polygon) & agricultural area on Re Farm Houdenbek 415 (orange polygon) and Re Farm Winkelhaak 224 (red polygon) near Op Die Berg, in the Koue Bokkeveld region of the Western Cape

## 2. THE DEVELOPMENT PROPOSAL

The proposed development (an empowerment project) entails construction of the new Harmony Instream Dam with a storage capacity of 250 000m<sup>3</sup>, a dam wall height of  $\pm 13$ m, and a dam wall length of  $\pm 280$ m. The estimated inundation area of the dam will be  $\pm 5.4$ ha on the lower slopes of the Houdenbeks Mountains (Figure 3). The dam will mainly be supplied with water from runoff from the surrounding catchment area, an unnamed tributary to the Houdenbek River upstream of the confluence with the Riet River. It is proposed that during dry years water will be pumped from the (proposed) new Toeka Instream Dam on Farm 415 to the new Harmony Instream Dam. Winter surplus water will be the primary source for the new dam.

The dam will be constructed, to mainly store and supply water for irrigation purposes associated with a proposed  $\pm 25$ ha agricultural expansion area on Re Farm Winkelhaak 224, located alongside a gravel farm road. Water will be conveyed via a pipeline from the new dam to an existing pipeline. Irrigation pipelines will be located in ploughed land and in road reserves. Irrigation pipelines thresholds will not trigger Listed Activities in terms of NEMA. The proposed development will not change the character of the site and will complement the surrounding, landuse which is agriculture (fruit, vegetable farming & some grazing).



Figure 3. Close up Google Earth satellite map of the proposed new Harmony Dam and proposed new agricultural areas on Farm Houdenbek 415 and Winkelhaak 225. Farm 225 is the preferred site for the proposed agricultural development.

### 3. HERITAGE LEGISLATION

The National Heritage Resources Act (Act No. 25 of 1999) makes provision for a compulsory Heritage Impact Assessment (HIA) when an area exceeding 5000 m<sup>2</sup> is being developed. This is to determine if the area contains heritage sites and to take the necessary steps to ensure that they are not damaged or destroyed during development.

The NHRA provides protection for the following categories of heritage resources:

- Landscapes, cultural or natural (Section 3 (3))
- Buildings or structures older than 60 years (Section 34).
- Archaeological sites, palaeontological material, and meteorites (Section 35).
- Burial grounds and graves (Section 36).
- Public monuments and memorials (Section 37).
- Living heritage (defined in the Act, as including cultural tradition, oral history, performance, ritual, popular memory, skills and techniques, indigenous knowledge systems and the holistic approach to nature, society, and social relationships) (Section 2 (d) (xxi)).

#### **4. DESCRIPTION OF THE RECEIVING ENVIRONMENT**

The Project Area is located on the Farm Houdenbek 415, about 12kms east of Op Die Berg on the R303. The farm is accessed from Ceres/Prince Alfred Hamlet via the Gydo Mountain Pass.

##### **4.1 New Harmony Instream Dam**

The proposed 5.4ha dam site is located at the foot of a narrow, deeply wooded kloof. The steep, east facing slopes of the rocky kloof are covered in dense Protea, while mostly Fynbos covers the west facing slopes. A small unnamed non-perennial stream (a tributary of the Houdenbek River) cuts through the kloof and runs alongside the western side of the proposed dam site, which is covered in dense riparian vegetation (Restio grass) and Fynbos, on a substrate of loose, gritty, floodplain sands (Figures 4-6). The northern portion of the site, behind the old dam wall, comprises agricultural lands which have not been developed for more than 10 years.



Figure 4. Proposed Harmony Dam. View facing south (Kaplan 2018). The Harmony rock art site (sandstone shelter) can be seen in the far distance.



Figure 5. Footprint of the proposed new Harmony Dam. The white pin is the position of the new dam wall. The heritage practitioner is standing on the old dam wall. View facing south (August 2024).



Figure 6. Footprint of the proposed new Harmony Dam. The white pin is the position of the new dam wall. View facing south (August 2024)

#### 4.2 Agricultural area (Re Farm 415)

The site for the proposed 30ha agricultural development on Farm Houdenbek 415 is a narrow strip of land located alongside a gravel farm road. The site slopes gently from north to south on a substrate of weathered quartzitic sands. There is a meandering band of sandstone alongside the northern boundary, while some bedrock sandstone occurs in a few places. Otherwise, there are no significant landscape features on the proposed site (Figures 7-10).



Figure 7. Proposed alternative agricultural area. View facing west.



Figure 8. Proposed new agricultural area. View facing west.



Figure 9. Proposed new agricultural area. View facing north east



Figure 10. Proposed new agricultural area. View facing north east.

#### 4.3 Agricultural area (Re Farm 224)

The site for the preferred new agricultural area is located north of a farm gravel road and adjacent the  $\pm 30$ ha proposed agricultural area, alongside the Houdenbek River. The landholdings comprise old agricultural land on softer alluvial sands that have not been developed for more than 10 years. A patch of vineyards (3ha in extent) is located within the footprint of the proposed new development area (Figures 11-14). There are no significant landscape features on the proposed development site. There is barely any surface stone covering the agricultural area.



Figure 11. Drone view of the preferred new agricultural area on Re Farm 224 alongside the Houdenbek River. View facing northeast



Figure 12. Drone view of the preferred new agricultural area on Re Farm 224 alongside the Houdenbek River. View facing west. Note the patch of vineyards alongside the farm road.



Figure 13. Drone view of the preferred new agricultural area on Re Farm 224 alongside the Houdenbek River. View facing west. The previous proposed 30ha agricultural area is located opposite the vineyards



Figure 14. Drone view of the preferred new agricultural area on Re Farm 224 alongside the Houdenbek River. View facing north

## **5. STUDY APPROACH**

### **5.1 Method**

A walk down of the proposed 30ha agricultural area on Re Farm Houdenbek 415 was conducted by ACRM on 12 August 2024. An assessment of the expanded footprint of the new Harmony Instream Dam, and dam wall was also carried out. Archaeological heritage resources were recorded using a hand-held GPS unit set on the map datum WGS 84. A desk top study was undertaken to describe the heritage context of the area.

### **5.2 Constraints and limitations**

There were no constraints or limitations associated with the study.

### **5.3 Identification of potential risks**

The study has shown that there are no archaeological or palaeontological risks associated with the development proposal.

### **5.4 Assumptions**

It is assumed that all project information, including, maps, description of activities and KMZ files distributed to specialists are accurate and up to date.

## **6. ARCHAEOLOGICAL CONTEXT**

People have occupied the Witzenberg and Koue Bokkeveld region of the Western Cape for well over a million years and Early Stone Age (ESA) and Middle Stone Age (MSA) tools occur locally (Kaplan 2009, 2005). Later Stone Age (LSA) 'Bushman'/San rock paintings are also well known in the area (Wiltshire 2011), particularly those depicting colonial imagery (Johnson *et al* 1959; Yates *et al* 1993). Rock paintings record the remarkable artistic achievement of the indigenous San of southern Africa who created them for religious purposes as part of a changing cultural tradition that persisted for over 20 000 years.

The Koue Bokkeveld was also unusual in terms of early Cape history, in that unlike many other areas from which the Khoisan quickly disappeared, there was sustained contact in the region between remnants of the Khoisan and colonists throughout the eighteenth century (Penn 1987). As a result, many farm labourers today trace their ancestry back to the Khoisan.

A search of the South African Heritage Resources Information System (SAHRIS) showed that several impact assessments have been lodged for the surrounding, including the Farm Houdenbek where Harmony 1 and Harmony rock art sites were recorded (Kaplan 2018). Other farms where rock paintings were recorded included the Farms Donkerbos (Kaplan 2009), Tandfontein (Kaplan 2008) and Libertas (Kaplan 2016).

The Eastern Cederberg Rock Art Group (eCRAG) has recorded several hundred rock art sites in the eastern Cederberg, but according to Nick Wiltshire (pers. comm.), the Koue Bokkeveld and Witzenberg regions has not been an area of focus of the eCRAG project. Several rock painting sites have, however, been documented in the area, on the Farm Visgat in the Witzenberg Valley (Nick Wiltshire pers. comm. 2022), while painted sites have been recorded on Kaleo Guest Farm, on the Farm Malabar 293, and on the Farm Goudmyn 458 (Hanu Swart pers. comm. 2023). Well preserved rock painting sites also occur on the Farm Swanepoelspoort (Gene Swannepoel pers. comm. 2024) and at Kagga Kamma Nature

Reserve on the edge of the Tankwa. Paintings of 'net scenes', dancing human figures, unidentified antelope, and a 'rain bull' were recorded on the Farm Driefontein 327 during Heritage Scoping for the proposed Gydo Renewable Energy Project (Kaplan 2023).

## 7. RESULTS

### 7.1 Archaeology

Two painted sites (HMY1 & HMY2) were recorded by ACRM (Kaplan 2018) during an AIA for the proposed new Harmony Instream Dam, in 2018 (HWC Case 1809305AS0904E). Large numbers of Later Stone Age (LSA) flake tools, including bladelet and cylindrical cores, adzes, microlithic scrapers, pottery and ostrich eggshell were recorded on alluvial sands in front of the 120m long sandstone shelter (Figures 15 & 16). HMY1 and HMY2 were graded as having High (IIIA) local archaeological significance because of the well-preserved condition of the art, which included paintings of human figures, antelope, and symbolic images such as rain animals, formlings, entoptics and geometric shapes. With kind permission of the landowner HMY1 and HMY2 were recorded in detail by the Eastern Cederberg Rock Art Group (eCRAG) in 2019, where the full record can be found on <https://sahris.org.za/node/87929>. A 50m 'No-Go' buffer around the site was proposed by CTS Heritage (Lavin 2018) as this would allow for the protection of the paintings as well as the archaeological deposit within the sandstone overhang resulting from the inundation of the new dam.



Figure 15. View of HMY1 & HMY2. View facing northeast (Kaplan 2018)

### 2024 study

An ESA flake quartzite flake (waypoint 324) was recorded in the sandy river bank of the small tributary of the Houdenbek River, close to the new dam wall (Figure 16 & Table 1). The river bank has been severely eroded and cut back as a result of the recent heavy rains in the area (in July). The remains are graded as not Conservation Worthy (NCW).

A few isolated LSA quartz flakes and chunks (waypoint 304) were also recorded on the sandy alluvial soils a few metres from the new dam wall. The remains are graded as NCW.

A low density scatter of LSA flakes in silcrete, indurated shale, and quartz including a MSA silcrete flake (waypoint 334) were recorded on a grassy sward in front of a small sandstone outcrop, about 40m from the new dam wall (Figures 17 & 18). No paintings were found. The site was previously recorded as HMY 3 (Kaplan 2018). The remains were graded as having *Low* (Grade IIIC) archaeological significance. The site will not be impacted by construction excavations.

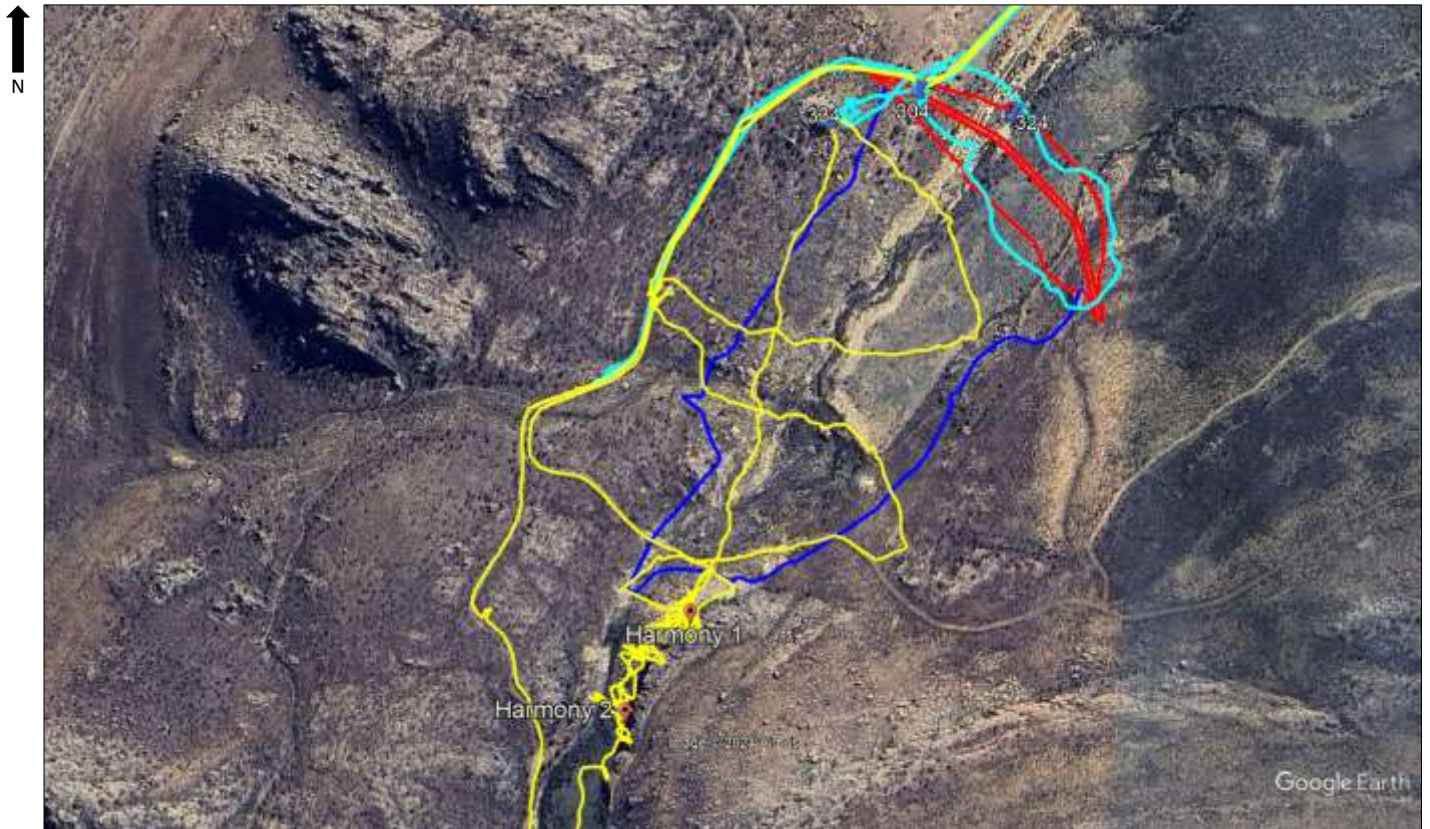


Figure 16. Track paths in light blue and waypoints of archaeological finds (2024): Proposed new Harmony Instream Dam. The dark blue line is the full supply level of the dam & the red line is the new dam wall. The yellow tracks are from the 2018 field study in which HMY1 and HMY2 painted sites were recorded (Kaplan 2018).



Figure 17. Waypoint 334 (also recorded as HMY3). A thin scatter of tools occurs on the grassy sward in front of the sandstone outcrop



Figure 18. Small collection of tools recorded on grassy sward (waypoint 334). The large ESA quartzite flake (waypoint 324) was found in the eroded river bank.

| Points      | Name of Farm  | Lat/long                    | Description of finds                                                                                                               | Grading  | Mitigation    |
|-------------|---------------|-----------------------------|------------------------------------------------------------------------------------------------------------------------------------|----------|---------------|
|             | Houdenbek 415 |                             |                                                                                                                                    | NCW      |               |
| 324         |               | 32°59'43.74"S 19°27'52.34"E | Early Stone Age quartzite flake                                                                                                    | NCW      | None required |
| 304         |               | 32°59'43.23"S 19°27'49.71"E | A few isolated LSA quartz flakes & chunks on sandy soils next to the new dam wall                                                  | NCW      | None required |
| 334 (HMY 3) |               | 32°59'43.95"S 19°27'47.27"E | Thin scatter of LSA flakes, chips, chunks & MSA silcrete flake, on grassy sward in front of small sandstone outcrop (no paintings) | Low IIIC | None required |
| 206         |               | 33° 0'19.48"S 19°28'57.30"E | Abandoned farm worker cottage in new agricultural area                                                                             | Low IIIC | None required |

Table 1. Spreadsheet of waypoints and description of archaeological finds

### Re Farm 415 Agricultural Area

No archaeological resources were encountered in the 30ha footprint of the proposed agricultural area on Re Farm Houdenbek 415 (Figure 19).

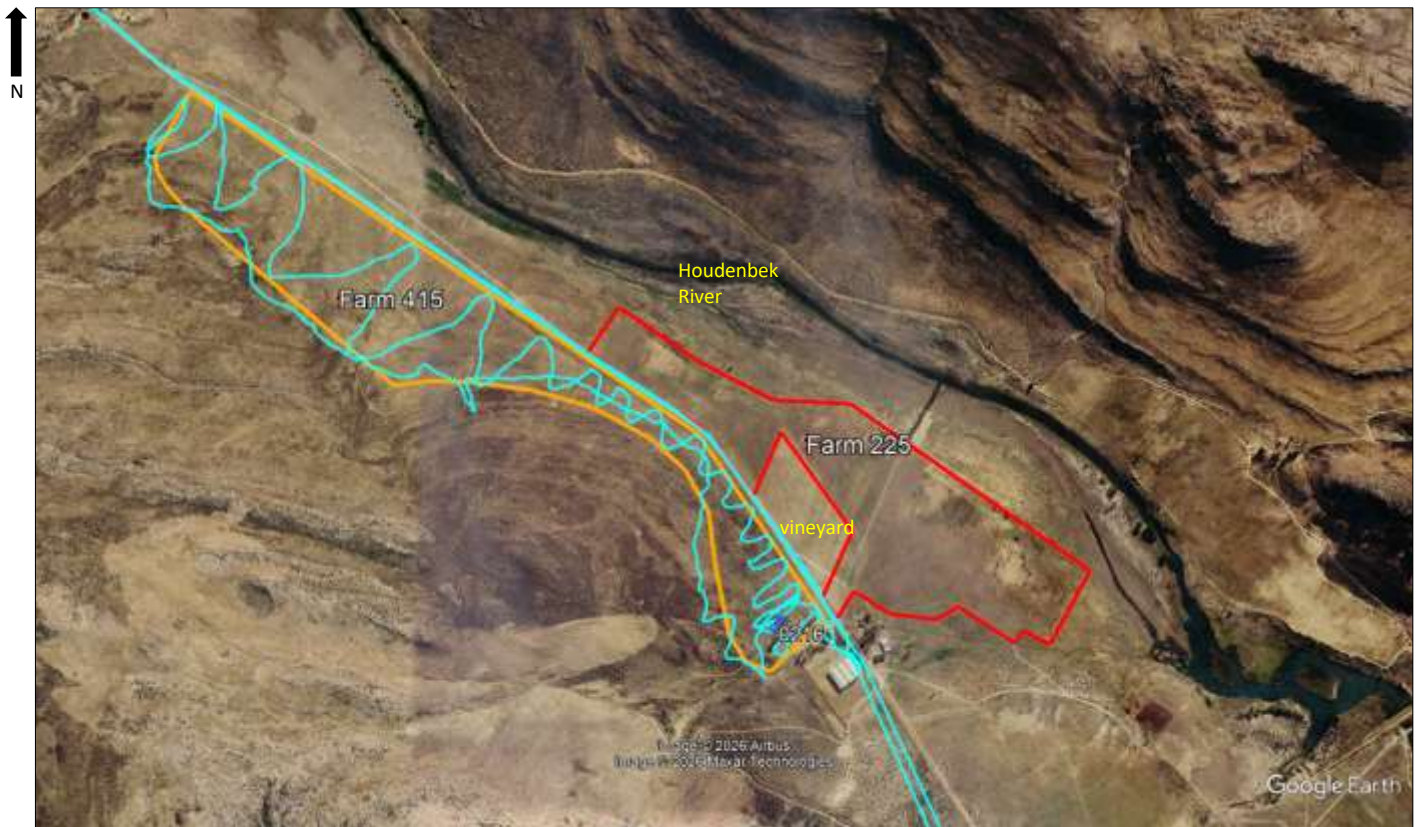


Figure 19. Trackpaths in blue (2024 study): Waypoint 206 is the location of a farm labourer's cottage (refer to Figures 22 & 23) .

As indicated the preferred 25ha agricultural area on Re Farm 224 Winkelhaak was not assessed by the CRM practitioner. The proposed new site has been severely transformed by historical agriculture and all indications are that the site is not a sensitive archaeological landscape (refer to Figures 11-14).

## 7.2 Palaeontology

According to Bamford (2024), the proposed dam and agricultural fields lie on the moderately sensitive Quaternary sands and the potentially very highly sensitive Ceres Subgroup (Figure 20), although no fossils have been recorded from this area.

Bamford notes that 'there is a very small chance that fossils may occur below the ground surface in the unweathered sandstones and quartzites of the Devonian-aged Ceres Subgroup (Bokkeveld Group, Cape Supergroup)'.

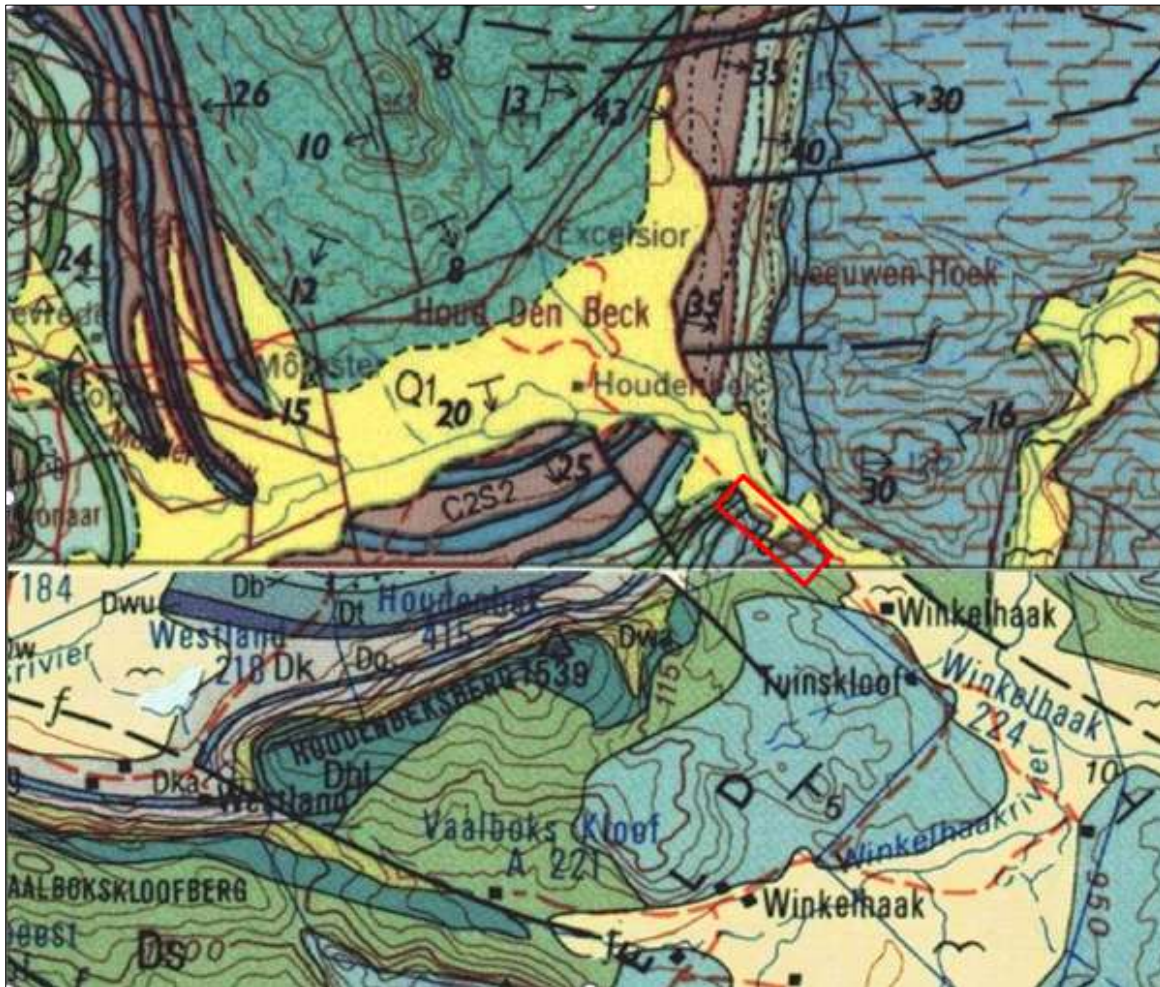


Figure 20. Geological map of the area around the Farm Houdenbek 415. The location of the proposed project is indicated within the red rectangle. Map enlarged from the Geological Survey 1: 250 000 map 3218 Clanwilliam (upper) and 3319 Worcester (lower) (Bamford 2024).

On the SAHRIS palaeo-sensitivity map, (Figure 21), the Project Area is indicated as very highly sensitive, but it is already disturbed by previous and present farming activities and is covered with soils. The dam and agricultural fields are in the moderately sensitive Quaternary sands (green) and the very highly sensitive Swartruggens Formation (red). The delicate fossil shells and traces are not likely to have survived the surface weathering or vegetation. It is unlikely that any fossils occur on the land surface, but they may occur below the soils in unweathered rocks.

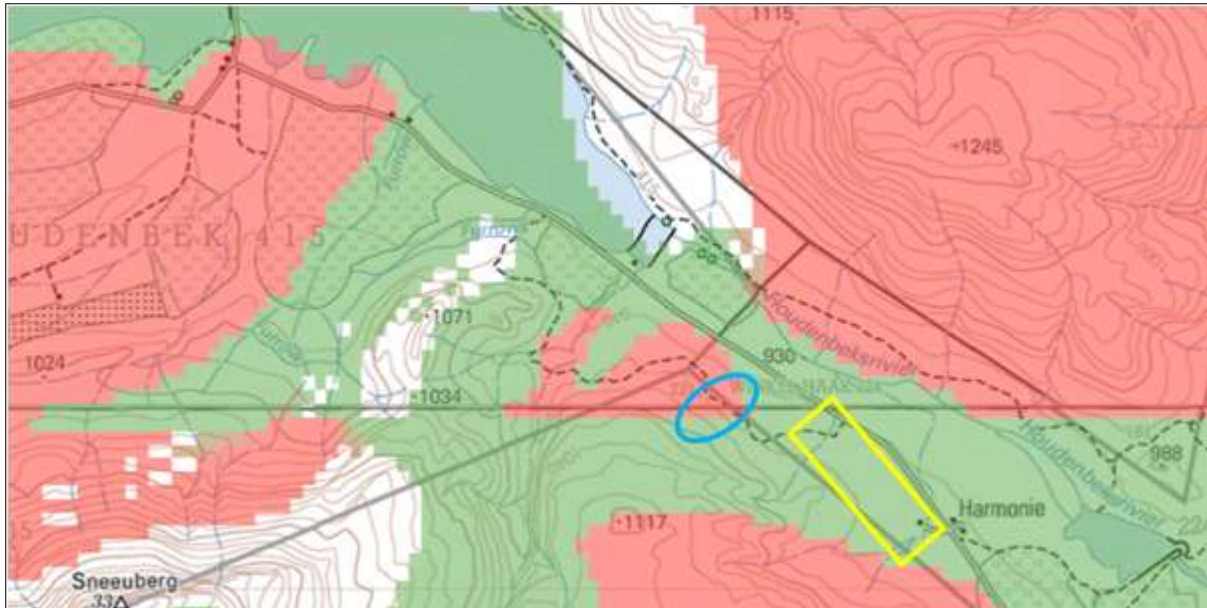


Figure 21. SAHRIS palaeosensitivity map for the site for the proposed Harmony dam (blue outline) & agricultural fields (yellow outline) on Farm Houdenbek 415. Background colours indicate the following degrees of sensitivity: red = very highly sensitive and green = moderate (Bamford 2024)

### 7.3 Graves

No graves were recorded in the footprint of the Project Area

### 7.4 Built Environment

An abandoned rectangular shaped, 2-roomed labourers cottage (waypoint 206 in Fig. 19) was recorded on the edge of the proposed agricultural area on Farm 415 (Figures 22 & 23). The dry, stone packed structure has been 'plastered' with thin daga and white washed and painted. The dwelling is likely older than 60 years but has been altered and has no intrinsic heritage significance. The windows are steel framed, the roof is sheet metal, and the brick plastered fireplace is a recent addition. A door at the back of the cottage has also been bricked over. The structure may need to be demolished, but this has not yet been confirmed by the applicant.



Figure 22. Abandoned farm labourer cottage (waypoint 206). The zinc roof & steel windows have been replaced. The fire place is also a later addition



Figure 23. Abandoned farm labourer cottage. Note the back door entrance has been bricked up

## **7.5 Cultural Landscape**

The Cultural Landscape is dominated by Agriculture (vegetable, fruit farming & grazing), including farm roads, farm buildings, farm sheds and equipment. A Wilderness quality (mountains) and the nearby meandering Houdenberg River complements the surrounding 'Sense of Place'.

## **8 ANTICIPATED IMPACTS**

### **8.1 Archaeology**

A 50m 'No-Go' buffer around HMY1 and HMY2 is designed to protect the shelter and associated rock art and archaeological deposits from future flooding of the dam. The paintings have been recorded by eCRAG, as part of mitigation action.

No impacts on archaeological heritage resources are anticipated in both proposed agricultural areas (Re Farm 414 & Re Farm 224).

### **8.2 Palaeontology**

According to Bamford (2024), 'there is a very small chance that fossils may occur below the ground surface in the unweathered sandstones and quartzites of the Devonian-aged Ceres Subgroup (Bokkeveld Group, Cape Supergroup)', in Farm No. 415

It is maintained that the same impact applies to Farm No. 224

## **9. COMMENTS**

No heritage related comments were received from the Witzenberg Local Municipality and Interested and affected parties.

There are no registered Heritage Conservation bodies in the area.

## **10. IMPACT STATEMENT**

Proposed construction of the new Harmony Instream Dam and proposed new agricultural areas on Re Farm Houdenberg 415 and Re Farm Winkelhaak 224 will not impact on local archaeological and palaeontological heritage resources.

HMY1 and HMY2 rock painting sites, graded as having High IIIA local significance, are located between 50 and 100m outside the full supply level of the proposed new dam and will not be impacted by construction excavations or inundation when full supply is reached, and the dam is operational.

## **11. CONCLUSION**

Proposed construction of the new Harmony Instream Dam and development of a new agricultural area on Re Farm Winkelhaak 224 is not expected to impact on important archaeological heritage resources.

As far as the palaeontology is concerned, 'the impact on palaeontological heritage would be low, so the project should be authorised' (Bamford 2024).

## **12. RECOMMENDATIONS**

Regarding the proposed construction of the new Harmony Instream Dam and development of new agricultural land on Re Farm Winkelhaak 224, the following recommendations are made:

### *10.1 Archaeology*

1. The Rock Art Guide document developed by CTS Heritage (Appendix B) must be included in the EMPr during the Construction Phase of the project and all construction and farm staff be informed of its contents.
2. As per the recommendation made by CTS Heritage (2018), a Heritage Agreement in terms of Section 42 of the NHRA must be signed between the landowner and Heritage Western Cape to ensure that HMY1 and HMY2 are protected.

### *10.2 Palaeontology*

1. The Fossil Chance Find Protocol should be added to the EMPr (Bamford 2024). If fossils are found by the environmental control officer, or other responsible person once excavations for the dam wall or ploughing of the fields have commenced then HWC must be notified, the fossils should be rescued, and a palaeontologist called to assess and collect a representative sample.

### 13. REFERENCES

Johnson, R.T., Rabinowitz, H & Sieff, P. Rock paintings at Katbakkies, Koue Bokkeveld, Cape. South African Archaeological Bulletin 14: 99-103.

Kaplan, J. 2023. Heritage Scoping Study for the proposed Gydo Renewable Energy Project, near Ceres, Witzenberg Local Municipality, Western Cape. Doorn Plaat 316, Nooitgedacht 322, Farm 324, Elandskloof 412, Long Acres 430, Driefontein 327, Goudmyn 458 & Vrystaat 331. Report prepared for Resource Management Services. ACRM, Cape Town.

Kaplan, J. 2018. Archaeological Impact Assessment, proposed development of the Harmony and Toeka Dams on the Farm Houdenbek 415, Witzenberg Municipality, Western Cape. Report submitted as part of a Heritage Impact Assessment by CTS Heritage. ACRM, Cape Town

Kaplan, J. 2016. Heritage Impact Assessment, proposed expansion of the in-streams Berg Dam on the Farm Libertas 426, Ceres RD, Western Cape. Report prepared for Pieter Badenhorst Professional Services. ACRM, Cape Town

Kaplan, J. 2009. Proposed construction of a storage dam on the farm Donkerbos 449, Ceres. Report prepared for EnviroAfrica. ACRM, Riebeek West

Kaplan, J. 2008. Archaeological Impact Assessment proposed expansion of agricultural lands on the Farm Tandfontein (Waboomsrivier) Koue Bokkeveld. Report prepared for Cederberg Environmental Services. Agency for Cultural Resource Management.

Kaplan, J. 2005. Phase 1 Archaeological Impact Assessment proposed Romansrivier-Ceres 66 Kv powerline refurbishment. Report prepared for Eskom. Agency for Cultural Resource Management

Lavin, J. 2018. Heritage Impact Assessment, Proposed Development of the Houdenbek Dams, Western Cape. Report prepared for EnviroAfrica cc. CTS Heritage, Cape Town

Penn, N. 1987. The frontier in the Western Cape, 1700-1740. In: Parkington, J.E. and Hall, M. (eds.) Papers in the prehistory of the Western Cape, South Africa: 462-503. Oxford: British Archaeological Reports.

Wiltshire, N. 2011. Spatial analysis of archaeological sites in the Western Cape using an integrated digital archive. Thesis presented for the degree of Master of Science. Department of Archaeology, University of Cape Town.

Yates, R., Manhire, A. & Parkington, J. 1993. Colonial era paintings in the rock art of the south-western Cape: some preliminary observations. South African Archaeological Society Goodwin Series 7:59-70.

HIA New Harmony Instream Dam & Agricultural Area on Farm Houdenbek 415 & Winkelhaak 224,  
near Ceres

## Appendix A

### Palaeontological Impact Assessment

HIA New Harmony Instream Dam & Agricultural Area on Farm Houdenbek 415 & Winkelhaak 224,  
near Ceres

## Appendix B

### Rock Art Guide Document



CTS HERITAGE

### Rock Art Sites

The National Heritage Resources Act is the overarching legislation that provides the framework for the protection of Rock Art Sites. The preamble to this legislation frames the intention of this legislation:

"This legislation aims to promote good management of the national estate, and to enable and **encourage communities to nurture and conserve their legacy** so that it may be bequeathed to future generations. Our heritage is unique and precious and it cannot be renewed. It helps us to define our cultural identity and therefore lies at the heart of our spiritual well-being and has the **power to build our nation**. It has the potential to affirm our diverse cultures, and in so doing shape our national character.

Our heritage celebrates our achievements and contributes to **redressing past inequities**. It educates, it deepens our understanding of society and encourages us to empathise with the experience of others. It facilitates healing and material and symbolic restitution and it promotes new and previously neglected research into our rich oral traditions and customs."

*Rock Art Sites are protected in terms of section 35 of the National Heritage Resources Act As such, **finest of up to R10,000** can be imposed if anyone is convicted of adding graffiti to the site.*

Certain behaviours are appropriate, and certain behaviours are not appropriate at a site like this.

#### DON'T:

- Dig into the sediment
- Remove any archaeological material from the site
- Graffiti the cave walls
- Wet or add any substance to the rock surface to make the paintings more visible
- Kick up dust in the cave
- Touch the paintings
- Try to chip the paint off
- or
- Light fires in the cave

#### DO:

- Take photographs
- Report any disturbance to the site
- Report any evidence of graffiti
- Respect the rarity and heritage value of rock paintings in the area
- Be aware that they were made at least a thousand years ago
- Be reminded that the paintings are part of the irreplaceable heritage of the San and Khoekhoe and their descendants
- And note that
- If they are damaged by careless behaviour, they cannot be repaired.

#### CTS Heritage

34 Harries Street, Plumstead, Cape Town, 7800  
Tel: +27 (0)87 073 5739 Email: [info@ctsheritage.com](mailto:info@ctsheritage.com) Web: [www.ctsheritage.com](http://www.ctsheritage.com)

HIA New Harmony Instream Dam & Agricultural Area on Farm Houdenbek 415 & Winkelhaak 224,  
near Ceres

## Appendix C

Specialist details/CV

## CURRICULUM VITAE

**Name:** Jonathan Michael Kaplan  
**Profession:** Archaeologist/Heritage Practitioner  
**Date of Birth:** 23-09-1961  
**Name of Company:** Agency for Cultural Resource Management (ACRM)  
**Position:** Director  
**Nationality:** South African  
**ID Number:** 6109235177089  
**Marital status:** Married with two children  
**Languages:**  
**First language:** English  
**Second Language:** Afrikaans  
**Contact details:** 5 Stuart Road  
Rondebosch  
7700  
Mobile 082 321 0172  
[jonathan@acrm.co.za](mailto:jonathan@acrm.co.za)

**Qualifications:**

- MA (Archaeology) University of Cape Town, 1989.

**Professional registration:**

- Association of Southern African Professional Archaeologists (ASAPA) Membership No. 64
- Registered with the South African Heritage Resources Agency (SAHRA)

**Company profile:**

ACRM was founded by Jonathan Kaplan in 1992 and is one of the oldest heritage consultancies in the country. Jonathan has completed nearly 3000 Archaeological and Heritage Impact Assessments (HIA & AIAs), specialising in Stone Age, coastal shell middens, rock art and herder studies. He has undertaken baseline studies on large infrastructure projects, including the Lesotho Highlands Water Project, Maguga Dam (Swaziland), Namibia/Botswana Water Transfer Project, Sasol/ACO Gas Pipeline (South Africa & Mozambique), Corridor Sands (Mozambique) and numerous utility projects for Eskom, the Department of Transport and Public Works, local and provincial authorities, as well as private developers. Since 2010, ACRM has conducted baseline studies (Scoping and full EIA) on alternative energy (Wind, PV Solar, Gas & Battery Energy Storage Systems) projects in the Western Cape, Northern Cape and Free State Provinces. Jonathan has also been appointed as a specialist consultant for archaeological collections for the Master Plan for the new Lesotho National Museum and Art Gallery currently under construction in Maseru.

**Countries of work experience:**

South Africa  
Lesotho  
Swaziland  
Namibia  
Botswana  
Mozambique

**Publications:**

- Orton, J., Avery, G., Halket, D., Hart, T. & Kaplan, J., 2020. Precolonial coastal archaeology between Table Bay and Yzerfontein, Western Cape, South Africa: a review of historical and recent observations. South African Journal of Humanities.
- Jerardino, A., Halkett, D., Hart, T., Kaplan, J., Navarro, R. & Nilssen, P. 2017. Filling-in the gaps and testing past scenarios on the central West Coast: hunter-gatherer subsistence and mobility at 'Deurspring 16' shell midden, Lamberts Bay, South Africa. South African Archaeological Bulletin
- Kaplan, J. & Mitchell, P. 2012. The archaeology of the Lesotho Highlands Water Project Phases 1A and 1 B. South African Humanities 24:1-32. KwaZulu Natal Museum.
- Sealy, J., Maggs, T., Jerardino, A. & Kaplan, J. 2004. Excavations at three shell middens at Melkbosstrand: variability among herder sites on Table Bay. South African Archaeological Bulletin 59:17-28.
- Kaplan, J. 1993. The state of archaeological information in the coastal zone from the Orange River to Ponta do Ouro. Report prepared for the Department of Environmental Affairs and Tourism. Agency for Cultural Resource Management.
- Kaplan, J. 1990. The Umhlatuzana Rock Shelter sequence: 100 000 years of Stone Age history. Natal Museum Journal of Humanities 2:1-94.
- Kaplan, J. 1989. 45 000 years of hunter-gatherer history at Umhlatuzana Rock Shelter. South African Archaeological Society Goodwin Series 6:7-16
- Kaplan, J. 1987. Settlement and Subsistence at Renbaan Cave. In Parkington, J. & Hall, M (Eds). Papers in the Prehistory of the Western Cape, South Africa. British Archaeological Reports International Series 332:237-261

**Services offered:**

- Archaeological Impact Assessments
- Heritage Impact Assessments
- Heritage Management Plans
- Heritage tourism
- Rock art recording
- Excavation and data analysis
- Monitoring of construction activities

**Declaration:**

I confirm that the above CV is an accurate description of my experience and qualifications.



**Signature**

**Date: 01 January 2025**

**Palaeontological Impact Assessment  
for the proposed development of the Harmony  
instream dam and associated agricultural area  
on the Remainder of Farm Houdenberg 415  
(Morester Landgoed), Ceres,  
Western Cape Province**

**Desktop Study (Phase 1)**

**For  
ACRM (Pty) Ltd**

**31 August 2024**

**Prof Marion Bamford**  
Palaeobotanist  
P Bag 652, WITS 2050  
Johannesburg, South Africa  
[Marion.bamford@wits.ac.za](mailto:Marion.bamford@wits.ac.za)

## **Expertise of Specialist**

The Palaeontologist Consultant: Prof Marion Bamford

Qualifications: PhD (Wits Univ, 1990); FRSSAf, mASSAf, PSSA

Experience: 35 years research and lecturing in Palaeontology

27 years PIA studies and over 350 projects completed

## **Declaration of Independence**

This report has been compiled by Professor Marion Bamford, of the University of the Witwatersrand, sub-contracted by ACRM (Pty) Ltd, Cape Town, South Africa. The views expressed in this report are entirely those of the author and no other interest was displayed during the decision making process for the Project.

Specialist: Prof Marion Bamford

Signature: *MCBamford*

## Executive Summary

A Palaeontological Impact Assessment was requested for the proposed construction of a farm dam and associated fields for cultivation, the Harmony Dam on the Remainder of Farm Houdenbek 415, Ceres district, Western Cape Province. HWC Case No: 18030613AS0308E.

To comply with the regulations of the South African Heritage Resources Agency (SAHRA) in terms of Section 38(8) of the National Heritage Resources Act, 1999 (Act No. 25 of 1999) (NHRA), a desktop Palaeontological Impact Assessment (PIA) was completed for the proposed development.

The proposed dam and agricultural fields lie on the moderately sensitive Quaternary sands and the potentially very highly sensitive Ceres Subgroup although no fossils have been recorded from this area. There is a very small chance that fossils may occur below the ground surface in the unweathered sandstones and quartzites of the Devonian-aged Ceres Subgroup (Bokkeveld Group, Cape Supergroup) so a Fossil Chance Find Protocol should be added to the EMP. If fossils are found by the environmental officer, or other responsible person once excavations for the dam wall or ploughing of the fields have commenced then HWC should be notified, the fossils should be rescued and a palaeontologist called to assess and collect a representative sample. The impact on the palaeontological heritage would be low, as far as the palaeontology is concerned, so the project should be authorised.

| ASPECT        | SCREENING TOOL SENSITIVITY | VERIFIED SENSITIVITY | OUTCOME STATEMENT/ PLAN OF STUDY   | RELEVANT SECTION MOTIVATING VERIFICATION |
|---------------|----------------------------|----------------------|------------------------------------|------------------------------------------|
| Palaeontology | Very High to Moderate      | Low                  | Palaeontological Impact Assessment | Section 7.2. SAHRA Requirements          |

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# 1. Background

The Harmony Trust is proposing to develop the Harmony instream dam, pipeline and associated agricultural area on the Remainder of Farm Houdenbek no. 415 (Morester Landgoed), Ceres, Western Cape.

EnviroAfrica cc has been appointed by Harmony Trust, to undertake the Environmental Impact Assessment for the proposed development. A notice of intent to develop will be submitted to the Department of Environmental Affairs & Development Planning (DEA&DP).

Project Description & Location (S32°59'47.00" ; 19°27'50.00"E) (Figures 1-2).

The proposed development includes the construction of the Harmony Dam with a storage capacity of 250 000 m<sup>3</sup> and a dam wall height of approximately 13 m. It will be mainly supplied with water from runoff emanating within the catchment area. The proposed dam will be constructed to store and supply water for irrigation purposes associated with the proposed approximately 30 ha agricultural expansion area. Water will be conveyed via a proposed pipeline from the proposed dam to an existing pipeline. Irrigation pipelines thresholds will not trigger Listed Activities in terms of NEMA and will be located on ploughed land and road reserves. The proposed dam footprint/flooded area will cover approximately 6 ha of land on the lower slopes of the Houdenbeks Mountains. The proposed site is located approximately 12 km east of town Die Dorp op die Berg (R303).

Description of Alternatives: Alternative including layout options and the option of not proceeding with the proposed development (the No-Go option) will be discussed in the application process.

A Palaeontological Impact Assessment was requested for the Harmony Dam project. To comply with the regulations of the South African Heritage Resources Agency (SAHRA) in terms of Section 38(8) of the National Heritage Resources Act, 1999 (Act No. 25 of 1999) (NHRA), a desktop Palaeontological Impact Assessment (PIA) was completed for the proposed development and is reported herein.

**Table 1: National Environmental Management Act, 1998 (Act No. 107 of 1998) (NEMA) and Environmental Impact Assessment (EIA) Regulations, 2014 (as amended) - Requirements for Specialist Reports (Appendix 6). Includes the requirements from GNR Appendix 6 of GN 326 EIA Regulation 2017.**

|     | <b>A specialist report prepared in terms of the Environmental Impact Regulations of 2017 must contain:</b> | <b>Relevant section in report</b> |
|-----|------------------------------------------------------------------------------------------------------------|-----------------------------------|
| ai  | Details of the specialist who prepared the report,                                                         | Appendix B                        |
| aii | The expertise of that person to compile a specialist report including a curriculum vitae                   | Appendix B                        |

|     | <b>A specialist report prepared in terms of the Environmental Impact Regulations of 2017 must contain:</b>                                                                                                           | <b>Relevant section in report</b> |
|-----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|
| b   | A declaration that the person is independent in a form as may be specified by the competent authority                                                                                                                | Page 1                            |
| c   | An indication of the scope of, and the purpose for which, the report was prepared                                                                                                                                    | Section 1                         |
| ci  | An indication of the quality and age of the base data used for the specialist report: SAHRIS palaeosensitivity map accessed – date of this report                                                                    | Yes                               |
| cii | A description of existing impacts on the site, cumulative impacts of the proposed development and levels of acceptable change                                                                                        | Section 5                         |
| d   | The date and season of the site investigation and the relevance of the season to the outcome of the assessment                                                                                                       | N/A                               |
| e   | A description of the methodology adopted in preparing the report or carrying out the specialised process                                                                                                             | Section 2                         |
| f   | The specific identified sensitivity of the site related to the activity and its associated structures and infrastructure                                                                                             | Section 4                         |
| g   | An identification of any areas to be avoided, including buffers                                                                                                                                                      | N/A                               |
| h   | A map superimposing the activity including the associated structures and infrastructure on the environmental sensitivities of the site including areas to be avoided, including buffers;                             | N/A                               |
| i   | A description of any assumptions made and any uncertainties or gaps in knowledge;                                                                                                                                    | Section 5                         |
| j   | A description of the findings and potential implications of such findings on the impact of the proposed activity, including identified alternatives, on the environment                                              | Section 4                         |
| k   | Any mitigation measures for inclusion in the EMPr                                                                                                                                                                    | Section 8, Appendix A             |
| l   | Any conditions for inclusion in the environmental authorisation                                                                                                                                                      | N/A                               |
| m   | Any monitoring requirements for inclusion in the EMPr or environmental authorisation                                                                                                                                 | Section 8, Appendix A             |
| ni  | A reasoned opinion as to whether the proposed activity or portions thereof should be authorised                                                                                                                      | Section 6                         |
| nii | If the opinion is that the proposed activity or portions thereof should be authorised, any avoidance, management and mitigation measures that should be included in the EMPr, and where applicable, the closure plan | Sections 6, 8                     |
| o   | A description of any consultation process that was undertaken during the course of carrying out the study                                                                                                            | N/A                               |
| p   | A summary and copies of any comments that were received during any consultation process                                                                                                                              | N/A                               |
| q   | Any other information requested by the competent authority.                                                                                                                                                          | N/A                               |

|   | A specialist report prepared in terms of the Environmental Impact Regulations of 2017 must contain:                                                                                                            | Relevant section in report |
|---|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|
| 2 | Where a government notice gazetted by the Minister provides for any protocol or minimum information requirement to be applied to a specialist report, the requirements as indicated in such notice will apply. | N/A                        |



**Figure 1: Google Earth map of the general area to show the relative land marks. The Toeka Dam project area is shown by the Pin.**



**Figure 2: Google Earth Map of the proposed development of Harmony Dam (blue outline) with associated agricultural fields (white outlines) on Farm Houdenbek 415, Ceres.**

## 2. Methods and Terms of Reference

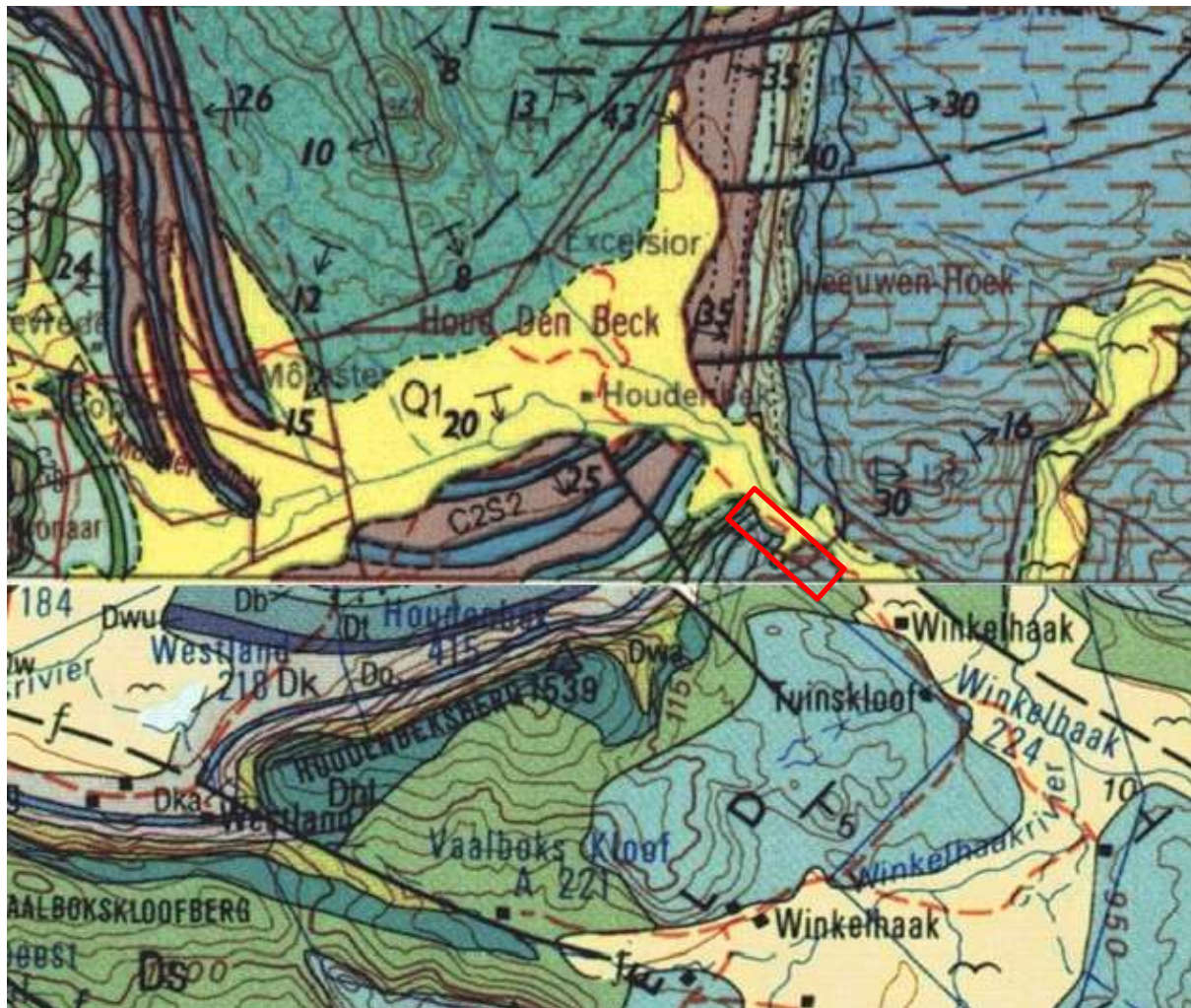
The Terms of Reference (ToR) for this study were to undertake a PIA and provide feasible management measures to comply with the requirements of SAHRA.

The methods employed to address the ToR included:

1. Consultation of geological maps, literature, palaeontological databases, published and unpublished records to determine the likelihood of fossils occurring in the affected areas. Sources include records housed at the Evolutionary Studies Institute at the University of the Witwatersrand and SAHRA databases; eg <https://sahris.sahra.org.za/map/palaeo>
2. Where necessary, site visits by a qualified palaeontologist to locate any fossils and assess their importance (*not applicable to this assessment*);
3. Where appropriate, collection of unique or rare fossils with the necessary permits for storage and curation at an appropriate facility (*not applicable to this assessment*); and
4. Determination of fossils' representativity or scientific importance to decide if the fossils can be destroyed or a representative sample collected (*not applicable to this assessment*).

### 3. Geology and Palaeontology

#### i. Project location and geological context



**Figure 3: Geological map of the area around the Farm Houdenbek 414. The location of the proposed project is indicated within the red rectangle. Abbreviations of the rock types are explained in Table 2. Map enlarged from the Geological Survey 1: 250 000 map 3218 Clanwilliam (upper) and 3319 Worcester (lower).**

Table 2: Explanation of symbols for the geological map and approximate ages (Tham and Johnson, 2006). SG = Supergroup; Fm = Formation; Ma = million years; grey shading = formations impacted by the project.

| Symbol       | Group/Formation                                                      | Lithology                      | Approximate Age                     |
|--------------|----------------------------------------------------------------------|--------------------------------|-------------------------------------|
| Q1           | Quaternary                                                           | Fluvial sands, alluvium        | Quaternary<br>Last 1.0Ma to Present |
| C3Q2S2<br>Ds | Swartruggens Fm,<br>Weltevrede Subgroup,<br>Witteberg Group, Cape SG | Shale, siltstone,<br>sandstone | Devonian                            |

| Symbol      | Group/Formation                                               | Lithology                     | Approximate Age |
|-------------|---------------------------------------------------------------|-------------------------------|-----------------|
| C3S2<br>Dbl | Blinkberg Fm, Weltevrede Subgroup, Witteberg Group, Cape SG   | Sandstone, siltstone          | Devonian        |
| C2Q4<br>Dwu | Wuppertal Fm, Bidouw Subgroup, Bokkeveld Group, Cape SG       | Sandstone, siltstone          | Devonian        |
| C2S4<br>Dw  | Waaboomburg Fm, Bidouw Subgroup, Bokkeveld Group, Cape SG     | Mudrock, siltstone, sandstone | Devonian        |
| C2Q3<br>Db  | Boplaas Fm, Ceres Subgroup, Bokkeveld Subgroup, Cape SG       | Sandstone                     | Devonian        |
| C2Q2<br>Dh  | Hex River Fm, Ceres Subgroup, Bokkeveld Subgroup, Cape SG     | Sandstone                     | Devonian        |
| C2S2<br>Dv  | Voorsteenhoek Fm, Ceres Subgroup, Bokkeveld Subgroup, Cape SG | Mudrock, siltstone            | Devonian        |

The project lies in the western part of the Cape Basin where rocks of the Bokkeveld and Witteberg Groups are exposed. Along the river valleys younger sands and alluvium of Quaternary age unconformably overlie the older rocks (Figure 3)

The **Cape Supergroup** comprises a series of siliciclastic sediments that were deposited in a passive margin basin and is underlain by Cambrian rocks of the Saldanian Orogeny and Pan African depositional cycles. It is overlain by the Karoo Basin sequence (Thamm and Johnson, 2006). Representing some 170 million years of earth history, and up to 10km of strata, the Cape Supergroup has since been deformed by the Cape Orogeny. It extends along the southern Cape coast for about 1000km (ibid). There are three major subdivisions, the basal Table Mountain Group, Bokkeveld and Witteberg Groups ranging from the Early Ordovician (ca 500 Ma) to the Early Carboniferous (ca 330 Ma). The subgroups and formations differ slightly between the western and eastern regions.

The **Table Mountain Group** is sandstone dominated and was deposited in shallow marine, glacial and fluvial environments. No subgroup name is given to the basal formations but the upper formations, Silurian to Devonian, are grouped into the Nardouw Subgroup.

The **Bokkeveld Group** has fossiliferous shale and sandstone units with a series of upward coarsening cycles that were attributed to repeated basin-ward progradation of wave-dominated deltas (Thamm and Johnson, 2006). Penn-Clarke et al. (2018) have reinterpreted the setting to rather have been a succession that accumulated in a storm-and-wave dominated deltaic palaeoenvironment.

The middle Devonian Bokkeveld Group has been divided into the basal **Ceres Subgroup** with five formations that stretch across the whole of the southern Cape. From the base upwards these formations are the Gydo, Gamka, **Voorstehoek**, **Hex River**, Tra-Tra and Boplaas Formations (Thamm and Johnson, 2006; Penn-Clarke et al., 2018a, b). To the west of 21°E the upper Bokkeveld Bidouw Subgroup five formations are recognised, the

Waboom, Wupperthal, Klipbokkop, Osberg and Karoopoort Formations. To the east of 21°E the equivalent is the Traka Subgroup with three formations, the Karies, Adolphspoort and Sandpoort Formations (ibid).

The **Witteberg Group** is composed of sandstone and mudrock that was deposited in shallow marine, paralic and deltaic environments (Thamm and Johson, 2006). Three subgroups are recognised. The Devonian Weltevrede Subgroup, west of 22°E, has three formations, the Wagendrift, Blinkberg and Swartruggens Formations, and is overlain by the Witpoort Formation. In the eastern section only the Weltevrede Formation is recognised, and also overlain by the Witpoort Formation.

West of 22°E the basal Wagendrift Formation is composed of bioturbated shale and siltstone with interbedded thin quartzitic sandstone. Invertebrate and trace fossils occur in this formation such as *Zoophycos*, *Spirophyton* and *Skolithos*. Marine invertebrates such as molluscs, trilobites and brachiopods occur. Plant fragments have been reported, such as psilophytes and lycopod stems (Boucot et al, 1983 in Thamm and Johnson, 2006).

The overlying Blinkberg Formation is made up of several prominent, white quartz arenites that are separated by subordinate siltstones. There are records of trace fossils and lycopod stems from this formation (Thamm and Johnson, 2006).

The upper formation of the Weltevrede Subgroup, the Swartruggens Formation, is composed of interbedded thin silty/sandy mudrock and sandstone layers, rhythmites, and generally two thick quartzitic sandstone units. The trace fossil *Zoophycos* has been reported by De Beer (1990) from this formation (ibid).

Weathering and erosion of sandstones and other rocks over time and especially since the uplift of the continent during several phases in the Cretaceous and Tertiary has resulted in sands and alluvium accumulating in depressions and along river valleys. These sands are from multiple origins and as they have been reworked they are difficult to date but probably were deposited in the Quaternary.

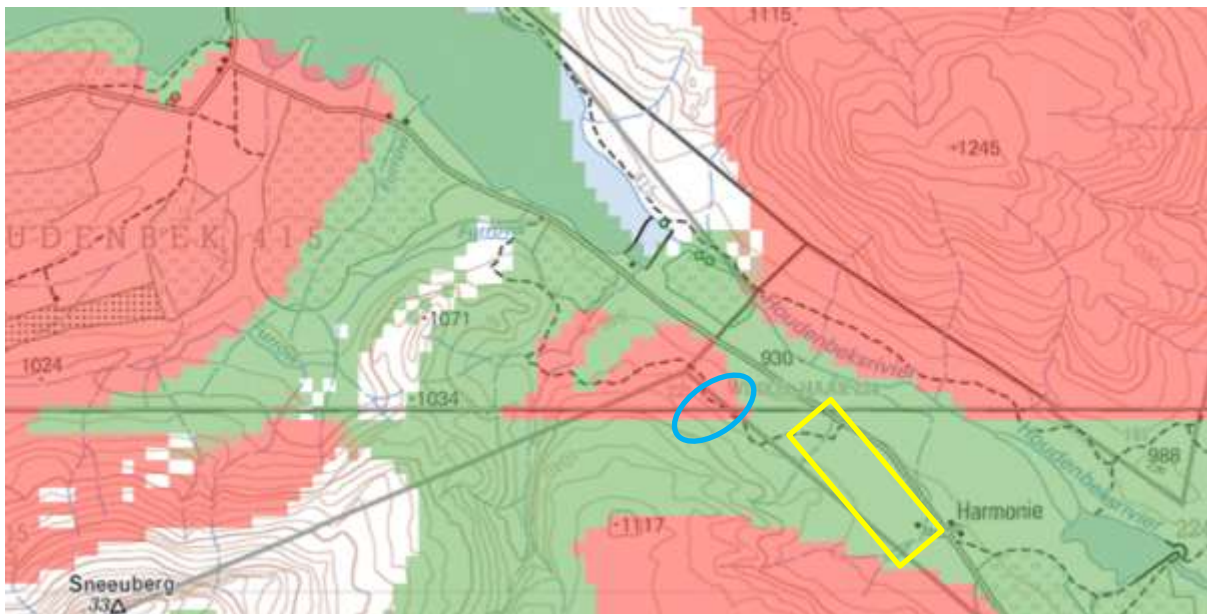
## ii. Palaeontological context

The palaeontological sensitivity of the area under consideration is presented in Figure 4. The dam and agricultural fields are in the moderately sensitive Quaternary sands (green) and the very highly sensitive Swartruggens Formation (red).

The time period of the Ordovician – Silurian – Devonian (about 485 – 350 Ma) is when the first terrestrial plants, bony fish and insects evolved and spread on the land, from precursors in the seas. The Cape Supergroup represents this period, and although southern Africa (in the middle of Gondwanaland) was positioned over or close to the South Pole, and was covered by a series of ice sheets (Visser, 1989; Isbell et al., 2012), some of the fine-grained shallow water and marginal mudstones and siltstones have fossils preserved within them (Plumstead, 1969; Theron, 1972; MacRae, 1999; Thamm and Johnson, 2006; Penn-Clarke et al., 2018). With the repeated cycles of sealevel rise and fall and resulting shifts from marine to shoreline to fluvial and delta settings and back again, there is a complex series of environments with the resident faunas.

The Ordovician lower Table Mountain Group preserves trace fossils, and invertebrates such as brachiopods, trilobites, eurypterids, conodonts and chitinozoans. There are records of invertebrate fossils, known as the **Malvinokaffric Faunal Assemblage**, in the Silurian – early Devonian upper Nardouw Subgroup and the whole of the Bokkeveld Group, while the Witteberg Group has records of fish and plants as well as invertebrates such as brachiopods, bivalves, gastropods and trilobites. More recent research has shown that the Malvinokaffric fauna of Gondwanaland (Bokkeveld Group) is somewhat different from the northern hemisphere fauna (Penn-Clarke et al., 2018b).

The Ceres Subgroup has abundant marine benthic (bottom-dwelling) invertebrate fossils such as brachiopods, bivalves, trilobites, cephalopods, crinoids, ophiuroids, hyoliths, crinoid stems, corals and gastropods (Hiller and Theron, 1988; Theron and Johnson, 1991; Thamm and Johnson et al., 2006; Penn-Clarke et al., 2018a). These marine fossils occur mostly in the mudrock units while plant fossils occur in the sandstone units. Some units also show extensive bioturbation based on the presence of trace fossils of burrows, such as *Planolites*, *Skolithos* and *Arenicolites*.



**Figure 4: SAHRIS palaeosensitivity map for the site for the proposed Harmony dam (blue outline) and agricultural fields (yellow outline) on Farm Houdenbek 415. Background colours indicate the following degrees of sensitivity: red = very highly sensitive; orange/yellow = high; green = moderate; blue = low; grey = insignificant/zero.**

From the SAHRIS map above the area is indicated as very highly sensitive but it is already disturbed by previous and present farming activities and is covered with soils. The delicate fossil shells and traces are not likely to have survived the surface weathering or vegetation. It is unlikely that any fossils occur on the land surface but they may occur below the soils in unweathered rocks.

## 4. Impact assessment

An assessment of the potential impacts to possible palaeontological resources considers the criteria encapsulated in Table 3:

**Table 3a: Criteria for assessing impacts**

| <b>PART A: DEFINITION AND CRITERIA</b>                                      |           |                                                                                                                                                                                |
|-----------------------------------------------------------------------------|-----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Criteria for ranking of the SEVERITY/NATURE of environmental impacts</b> | <b>H</b>  | Substantial deterioration (death, illness or injury). Recommended level will often be violated. Vigorous community action.                                                     |
|                                                                             | <b>M</b>  | Moderate/ measurable deterioration (discomfort). Recommended level will occasionally be violated. Widespread complaints.                                                       |
|                                                                             | <b>L</b>  | Minor deterioration (nuisance or minor deterioration). Change not measurable/ will remain in the current range. Recommended level will never be violated. Sporadic complaints. |
|                                                                             | <b>L+</b> | Minor improvement. Change not measurable/ will remain in the current range. Recommended level will never be violated. Sporadic complaints.                                     |
|                                                                             | <b>M+</b> | Moderate improvement. Will be within or better than the recommended level. No observed reaction.                                                                               |
|                                                                             | <b>H+</b> | Substantial improvement. Will be within or better than the recommended level. Favourable publicity.                                                                            |
| <b>Criteria for ranking the DURATION of impacts</b>                         | <b>L</b>  | Quickly reversible. Less than the project life. Short term                                                                                                                     |
|                                                                             | <b>M</b>  | Reversible over time. Life of the project. Medium term                                                                                                                         |
|                                                                             | <b>H</b>  | Permanent. Beyond closure. Long term.                                                                                                                                          |
| <b>Criteria for ranking the SPATIAL SCALE of impacts</b>                    | <b>L</b>  | Localised - Within the site boundary.                                                                                                                                          |
|                                                                             | <b>M</b>  | Fairly widespread – Beyond the site boundary. Local                                                                                                                            |
|                                                                             | <b>H</b>  | Widespread – Far beyond site boundary. Regional/ national                                                                                                                      |
| <b>PROBABILITY (of exposure to impacts)</b>                                 | <b>H</b>  | Definite/ Continuous                                                                                                                                                           |
|                                                                             | <b>M</b>  | Possible/ frequent                                                                                                                                                             |
|                                                                             | <b>L</b>  | Unlikely/ seldom                                                                                                                                                               |

**Table 3b: Impact Assessment**

| <b>PART B: Assessment</b> |           |                                                                                                                                                                                                                     |
|---------------------------|-----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>SEVERITY/NATURE</b>    | <b>H</b>  | -                                                                                                                                                                                                                   |
|                           | <b>M</b>  | -                                                                                                                                                                                                                   |
|                           | <b>L</b>  | Soils do not preserve fossils; so far there are no records from the Ceres Subgroup of plant or animal fossils in this region so it is very unlikely that fossils occur on the site. The impact would be negligible. |
|                           | <b>L+</b> | -                                                                                                                                                                                                                   |
|                           | <b>M+</b> | -                                                                                                                                                                                                                   |

| <b>PART B: Assessment</b> |           |                                                                                                                                                                                                                                                                          |
|---------------------------|-----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                           | <b>H+</b> | -                                                                                                                                                                                                                                                                        |
| <b>DURATION</b>           | <b>L</b>  | -                                                                                                                                                                                                                                                                        |
|                           | <b>M</b>  | -                                                                                                                                                                                                                                                                        |
|                           | <b>H</b>  | Where manifest, the impact will be permanent.                                                                                                                                                                                                                            |
|                           |           |                                                                                                                                                                                                                                                                          |
| <b>SPATIAL SCALE</b>      | <b>L</b>  | Since the only possible fossils within the area would be fossil shells and invertebrates in the quartzites and sandstones, the spatial scale will be localised within the site boundary.                                                                                 |
|                           | <b>M</b>  | -                                                                                                                                                                                                                                                                        |
|                           | <b>H</b>  | -                                                                                                                                                                                                                                                                        |
|                           |           |                                                                                                                                                                                                                                                                          |
| <b>PROBABILITY</b>        | <b>H</b>  | -                                                                                                                                                                                                                                                                        |
|                           | <b>M</b>  | -                                                                                                                                                                                                                                                                        |
|                           | <b>L</b>  | It is extremely unlikely that any fossils would be found in the loose soils and sands that cover the area or in the quartzites or sandstones that might occur below the ground surface. Nonetheless, a Fossil Chance Find Protocol should be added to the eventual EMPr. |
|                           |           |                                                                                                                                                                                                                                                                          |

Based on the nature of the project, surface activities may impact upon the fossil heritage if preserved in the development footprint. The geological structures suggest that the rocks are the correct age and type to preserve Devonian invertebrates, traces or primitive plants. Furthermore, the material to be used for agriculture is soil and this does not preserve fossils. Since there is a small chance that fossils from the Ceres Subgroup may be disturbed a Fossil Chance Find Protocol has been added to this report. Taking account of the defined criteria, the potential impact to fossil heritage resources is low.

## 5. Assumptions and uncertainties

Based on the geology of the area and the palaeontological record as we know it, it can be assumed that the formation and layout of the dolomites, sandstones, shales and sands are typical for the country and most do not contain fossil plant, insect, invertebrate and vertebrate material. The sands and soils of the Quaternary period would not preserve fossils.

## 6. Recommendation

Based on experience and the lack of any previously recorded fossils from the area, it is extremely unlikely that any fossils would be preserved in the overlying soils of the Quaternary. There is a very small chance that fossils may occur below the ground surface in the unweathered sandstones and quartzites of the Devonian-aged Ceres Subgroup (Bokkeveld Group, Cape Supergroup) so a Fossil Chance Find Protocol should be added to the EMPr. If fossils are found by the environmental officer, or other responsible person once excavations for the dam wall or ploughing of the fields have commenced then HWC

should be notified, the fossils should be rescued and a palaeontologist called to assess and collect a representative sample. The impact on the palaeontological heritage would be low, as far as the palaeontology is concerned, so the project should be authorised.

| ASPECT        | SCREENING TOOL SENSITIVITY | VERIFIED SENSITIVITY | OUTCOME STATEMENT/ PLAN OF STUDY   | RELEVANT SECTION MOTIVATING VERIFICATION |
|---------------|----------------------------|----------------------|------------------------------------|------------------------------------------|
| Palaeontology | Very High to moderate      | Low                  | Palaeontological Impact Assessment | Section 7.2. SAHRA Requirements          |

## 7. References

- Almond, J.E., Pether, J. 2008. Palaeontological Heritage of the Western Cape; interim report. SAHRA Report. 23pp.
- Hiller, N., Theron, H.N., 1988, Benthic communities in the South African Devonian. In: McMillan, N.J., Embry, A.F. and Glass, D.J., (Eds). Devonian of the World. Volume III: Palaeontology, Palaeoecology and Stratigraphy. Memoirs of the Canadian Society of Petroleum Geology 14, 229-242.
- Isbell, J.L., Henry, L.C., Gulbranson, E.L., Limarino, C.O., Fraiser, F.L., Koch, Z.J., Ciccioli, P.I., Dineen, A.A., 2012. Glacial paradoxes during the late Paleozoic ice age: Evaluating the equilibrium line altitude as a control on glaciation. Gondwana Research 22, 1-19.
- MacRae, C.S., 1999. Life Etched in Stone. Fossils of South Africa. Geological Society of South Africa, Johannesburg. 305pp.
- Penn-Clarke, C.R., Harper, D.A.T., 2023. The rise and fall of the Malvinohoson (Malvinokaffric) bioregion in South Africa: Evidence for Early-Middle Devonian biocrises at the South Pole. Earth-Science Reviews 246 (2023) 104595
- Penn-Clarke, C.R., Rubidge, B.S., Jinnah, Z.A., 2018a. High palaeolatitude environmental change during the early to middle Devonian: insights from Emsian-Eifelian (lower-middle Devonian) siliciclastic depositional systems of the Ceres Subgroup (Bokkeveld Group) of South Africa. Journal of Sedimentary Research, 88, 1040–1075.
- Penn-Clarke, C.R., Rubidge, B.S., Jinnah, Z.A., 2018b. Two hundred years of palaeontological discovery: Review of research on the Early to Middle Devonian Bokkeveld Group (Cape Supergroup) of South Africa. Journal of African Earth Sciences 137, 157-178.
- Plumstead, E.P., 1969. Three thousand million years of plant life in Africa. Geological Society of southern Africa, Annexure to Volume LXXII. 72pp + 25 plates.

Thamm, A.G., Johnson, M.R., 2006. The Cape Supergroup. In: Johnson, M.R., Anhaeusser, C.R. and Thomas, R.J., (Eds). The Geology of South Africa. Geological Society of South Africa, Johannesburg / Council for Geoscience, Pretoria. Pp 443 – 460.

Theron, J.N., 1972. The Stratigraphy and Sedimentation of the Bokkeveld Group. D.Sc. Thesis (unpublished). University of Stellenbosch, South Africa, p. 175.

Theron, J.N., Johnson, M.R., 1991. Bokkeveld Group including the Ceres, Bidouw and Traka Subgroups. In: Johnson, M.R. (Ed). Catalogue of South African Lithostratigraphic Units. South African Commission on Stratigraphy 3-1 – 3-5.

Visser, J.N.J., 1989. The Permo-Carboniferous Dwyka Formation of southern Africa: deposition by a predominantly subpolar marine icesheet. *Palaeogeography, Palaeoclimatology, Palaeoecology* 70, 377-391.

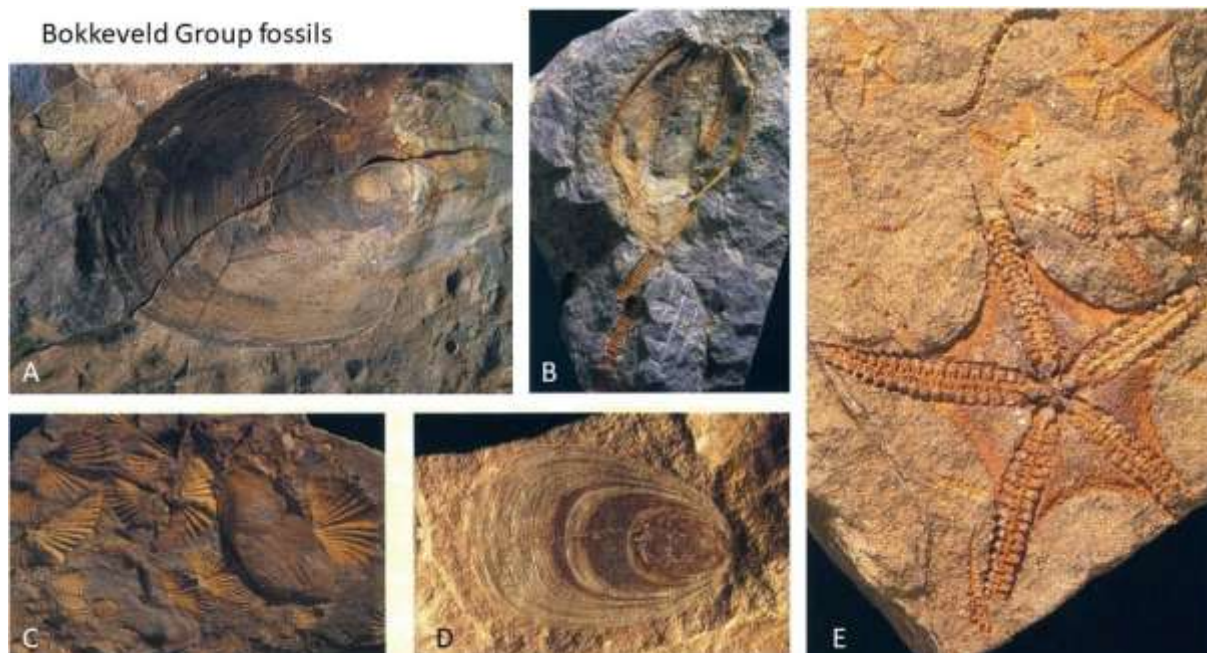
## 8. Chance Find Protocol

### **Monitoring Programme for Palaeontology – to commence once the excavations / drilling activities begin.**

1. The following procedure is only required if fossils are seen on the surface and when drilling/excavations commence.
2. When excavations begin the rocks and discard must be given a cursory inspection by the environmental officer or designated person. Any fossiliferous material (plants, insects, bone or coal) should be put aside in a suitably protected place. This way the project activities will not be interrupted.
3. Photographs of similar fossils must be provided to the developer to assist in recognizing the fossil plants, vertebrates, invertebrates or trace fossils in the shales and mudstones (for example see Figure 5). This information will be built into the EMP's training and awareness plan and procedures.
4. Photographs of the putative fossils can be sent to the palaeontologist for a preliminary assessment.
5. If there is any possible fossil material found by the developer/environmental officer then the qualified palaeontologist sub-contracted for this project, should visit the site to inspect the selected material and check the dumps where feasible.
6. Fossil plants or vertebrates that are considered to be of good quality or scientific interest by the palaeontologist must be removed, catalogued and housed in a suitable institution where they can be made available for further study. Before the fossils are removed from the site a HWC/ECHPRA/SAHRA permit must be obtained. Annual reports must be submitted to HWC/ECHPRA/SAHRA as required by the relevant permits.
7. If no good fossil material is recovered then no site inspections by the palaeontologist will be necessary. A final report by the palaeontologist must be sent to HWC/RCHPRA/SAHRA once the project has been completed and only if there are fossils.

8. If no fossils are found and the excavations have finished then no further monitoring is required.

## 9. Appendix A – Examples of fossils from the Cape Supergroup



**Figure 5: Photographs of invertebrate and shelly fossils from the Bokkeveld Group (Devonian), to assist the responsible person on site.**

## 10. Appendix B – Details of specialist

### **Curriculum vitae (short) - Marion Bamford PhD January 2024**

Present employment: Professor; Director of the Evolutionary Studies Institute.  
Member Management Committee of the NRF/DSI Centre of Excellence Palaeosciences, University of the Witwatersrand, Johannesburg, South Africa

Telephone : +27 11 717 6690  
Cell : 082 555 6937  
E-mail : [marion.bamford@wits.ac.za](mailto:marion.bamford@wits.ac.za);  
[marionbamford12@gmail.com](mailto:marionbamford12@gmail.com)

#### **ii) Academic qualifications**

Tertiary Education: All at the University of the Witwatersrand:  
 1980-1982: BSc, majors in Botany and Microbiology. Graduated April 1983.  
 1983: BSc Honours, Botany and Palaeobotany. Graduated April 1984.  
 1984-1986: MSc in Palaeobotany. Graduated with Distinction, November 1986.  
 1986-1989: PhD in Palaeobotany. Graduated in June 1990.

### iii) Professional qualifications

*Wood Anatomy Training (overseas as nothing was available in South Africa):*  
 1994 - Service d'Anatomie des Bois, Musée Royal de l'Afrique Centrale, Tervuren, Belgium, by Roger Dechamps  
 1997 - Université Pierre et Marie Curie, Paris, France, by Dr Jean-Claude Koeniguer  
 1997 - Université Claude Bernard, Lyon, France by Prof Georges Barale, Dr Jean-Pierre Gros, and Dr Marc Philippe

### iv) Membership of professional bodies/associations

Palaeontological Society of Southern Africa  
 Royal Society of Southern Africa - Fellow: 2006 onwards  
 Academy of Sciences of South Africa - Member: Oct 2014 onwards  
 International Association of Wood Anatomists - First enrolled: January 1991  
 International Organization of Palaeobotany – 1993+  
 Botanical Society of South Africa  
 South African Committee on Stratigraphy – Biostratigraphy - 1997 - 2016  
 SASQUA (South African Society for Quaternary Research) – 1997+  
 PAGES - 2008 –onwards: South African representative  
 ROCEEH / WAVE – 2008+  
 INQUA – PALCOMM – 2011+onwards

### v) Supervision of Higher Degrees

All at Wits University

| Degree               | Graduated/completed | Current |
|----------------------|---------------------|---------|
| Honours              | 13                  | 0       |
| Masters              | 13                  | 3       |
| PhD                  | 13                  | 7       |
| Postdoctoral fellows | 14                  | 4       |

### vi) Undergraduate teaching

Geology II – Palaeobotany GEOL2008 – average 65 students per year  
 Biology III – Palaeobotany APES3029 – average 25 students per year  
 Honours – Evolution of Terrestrial Ecosystems; African Plio-Pleistocene Palaeoecology;  
 Micropalaeontology – average 12 - 20 students per year.

### vii) Editing and reviewing

Editor: Palaeontologia africana: 2003 to 2013; 2014 – Assistant editor  
 Guest Editor: Quaternary International: 2005 volume  
 Member of Board of Review: Review of Palaeobotany and Palynology: 2010 –  
 Associate Editor: Cretaceous Research: 2018-2020  
 Associate Editor: Royal Society Open: 2021 -

Review of manuscripts for ISI-listed journals: 30 local and international journals

#### viii) **Palaeontological Impact Assessments**

27 years' experience in PIA site and desktop projects

Selected from recent projects only – list not complete:

- Beaufort West PV Facility 2021 for ACO Associates
- Copper Sunset MR 2021 for Digby Wells
- Sannaspos PV facility 2021 for CTS Heritage
- Smithfield-Rouxville-Zastron PL 2021 for TheroServe
- Glosam Mine 2022 for AHSA
- Wolf-Skilpad-Grassridge OHPL 2022 for Zutari
- Iziduli and Msenge WEFs 2022 for CTS Heritage
- Hendrina North and South WEFs & SEFs 2022 for Cabanga
- Dealesville-Springhaas SEFs 2022 for GIBB Environmental
- Vhuvhili and Mukondeleli SEFs 2022 for CSIR
- Chemwes & Stilfontein SEFs 2022 for CTS Heritage
- Equestria Exts housing 2022 for Beyond Heritage
- Zeerust Salene boreholes 2022 for Prescali
- Tsakane Sewer upgrade 2022 for Tsimba
- Transnet MPP inland and coastal 2022 for ENVASS
- Ruighoek PRA 2022 for SLR Consulting (Africa)
- Namli MRA Steinkopf 2022 for Beyond Heritage
- Adara 2 SEF 2023 for CTS Heritage
- Buffalo & Lyra SEFs 2023 for Nextec
- Camel Thorn Group Prospecting Rights 2023 for AHSA
- Dalmanutha SEFs 2023 for Beyond Heritage
- Elandsfontein Residential 2023 for Beyond Heritage
- Waterkloof Samancor 2023 for Elemental Sustainability
- Zonnebloem WTP 2023 for WSP
- Elders Irrigation 2023 for SRK
- Leghoya WEFS 2023 for Red Cap & SLR

#### ix) **Research Output**

Publications by M K Bamford up to January 2024 peer-reviewed journals or scholarly books: over 175 articles published; 5 submitted/in press; 14 book chapters.

Scopus h-index = 32; Google Scholar h-index = 40; i10-index = 121 based on 7261 citations.

Conferences: numerous presentations at local and international conferences.

## COMMENTS AND RESPONSE REPORT – HARMONY INSTREAM DAM

| Initial Comments received – 08 August 2024 until 13 September 2024 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |              |
|--------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|
| Date                                                               | Comment                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | I&AP             | Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Respondent   |
| <b>Abstraction/Extraction</b>                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |              |
| Thur 2024/09/12                                                    | Please register me as an interested and affected party for the projects described below                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Nik Wullschleger | You are hereby registered as an Interested and Affected Party (I&AP) in the environmental assessment process.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | EnviroAfrica |
| <b>Objection to development.</b>                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |              |
| Sat 2024/09/07                                                     | Our property is bordered to the east by the Riet River, into which the Houdenbek and Winkelhaak Rivers flow. Any disruption to the flow of the Houdenbek River and its catchment will have a direct impact on the Riet River, negatively impacting on this important water resource for us and others downstream of the river and all the natural systems and creatures that rely on it. We rely on the permanent water holes of the Riet River as our only source of water. Until the very recent extreme weather, the Riet River had not flowed for ten years, not even in winter. Twenty years ago, before the expansion of agriculture and dams in the catchment area, it flowed all year round. | J Buckley        | <p>The proposed Harmony Instream Dam is a small in-stream storage facility with a capacity of 250,000 m<sup>3</sup>, located on an unnamed tributary of the Houdenbek River, upstream of its confluence with the Winkelhaak River and ultimately the Riet River.</p> <p><u>To address your concerns:</u></p> <p>1. Limited Catchment Impact</p> <ul style="list-style-type: none"> <li>The dam is situated on a minor tributary with a small local catchment.</li> <li>It is primarily intended to capture runoff from winter rainfall events and ephemeral flows, not to intercept the mainstem flow of the Houdenbek River.</li> <li>As such, its contribution to cumulative flow reduction in the Riet River is expected to be very limited.</li> </ul> <p>2. Water Use Licence Safeguards</p> <p>The Harmony Dam forms part of a project authorised under a Water Use Licence (WUL) issued by the Department of Water and Sanitation. Key conditions include:</p> <ul style="list-style-type: none"> <li>Abstraction limited to surplus winter runoff only.</li> <li>No abstraction is permitted during low-flow (baseflow) periods.</li> </ul> | EnviroAfrica |

## COMMENTS AND RESPONSE REPORT – HARMONY INSTREAM DAM

|                |                                                                                      |                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |              |
|----------------|--------------------------------------------------------------------------------------|------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|
|                |                                                                                      |                  | <ul style="list-style-type: none"> <li>• Installation of flow measurement and monitoring infrastructure to ensure compliance.</li> <li>• All water taken is measured and reported to DWS biannually.</li> </ul> <p>3. Ecological and Downstream Protection</p> <ul style="list-style-type: none"> <li>• The dam must comply with Ecological Reserve Requirements under the National Water Act, ensuring that sufficient water remains available for downstream ecosystems.</li> <li>• The design and operation of the dam are not intended to reduce the availability of water in permanent pools or downstream reaches of the Riet River.</li> </ul> <p>4. Environmental Impact Assessment (EIA) Process</p> <ul style="list-style-type: none"> <li>• A freshwater specialist study has been conducted and confirms that, due to the small scale and siting of the Harmony Dam, the potential impact on downstream flows is negligible.</li> <li>• The area has already been hydrologically assessed, and the results will form part of the final Environmental Impact Report (EIR).</li> </ul> <p>Your concerns have been formally recorded and will be included in the Comments and Response Report. The project team remains committed to ongoing engagement, transparency, and ensuring that the rights and needs of downstream users are protected in accordance with environmental legislation and water governance protocols.</p> |              |
| Wed 2024/09/18 | A number of taxa are unique.<br>Of the 8 species of the genus <i>Baeoura</i> , seven | Vladimir Lantsov | The high levels of endemism across multiple invertebrate genera, including <i>Baeoura</i> ,                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | EnviroAfrica |

## COMMENTS AND RESPONSE REPORT – HARMONY INSTREAM DAM

|  |                                                                                                                                                                                                                                                                                                                                                                                          |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  |
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|  | <p>are endemic, of the 10 species of <i>Austrolimnophila</i>, 8 are endemic, of the 19 species of the genus <i>Nephrotoma</i>, 11 are endemic, of the 32 species of <i>Leptotarsus</i>, 30 are endemic, of the 4 species of <i>Hexatoma</i>, three are endemic and one is subendemic, four of the 8 species of the <i>subgenus Acutipula</i> in the genus <i>Tipula</i> are endemic.</p> |  | <p><i>Austrolimnophila</i>, <i>Nephrotoma</i>, <i>Leptotarsus</i>, <i>Hexatoma</i>, and <i>Tipula</i> (subgenus <i>Acutipula</i>), are scientifically significant and reinforce the ecological sensitivity of the broader Koue Bokkeveld region.</p> <p>These findings align with the well-established understanding that the Cape Floristic Region and its surrounding ecotones represent one of the world's foremost biodiversity hotspots. The presence of highly range-restricted and potentially habitat-specialist taxa enhances the conservation value of intact habitat patches, especially riparian corridors, seasonal wetlands, and fynbos interfaces, which support the microhabitats essential to many of these species.</p> <p>While the direct project footprint for the Harmony Dam is primarily located in an area of transformed agricultural land, the Freshwater and Botanical Impact Assessments undertaken as part of the EIA process have assessed the potential for indirect or cumulative impacts on surrounding biodiversity, including invertebrate habitat.</p> <p>Key mitigation measures include:</p> <ul style="list-style-type: none"> <li>• Avoiding intact natural habitat wherever feasible during final layout planning.</li> <li>• Ensuring water abstraction is limited to surplus winter flows only, thereby reducing impacts on baseflows and sensitive aquatic or semi-aquatic microhabitats.</li> <li>• Rehabilitating disturbed riparian zones to support the recovery of native flora and associated invertebrate communities.</li> <li>• Implementing biodiversity monitoring protocols during and after construction to detect and address any unforeseen ecological impacts.</li> </ul> |  |
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## COMMENTS AND RESPONSE REPORT – HARMONY INSTREAM DAM

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|                |                                                                                                                                                                                                                                                                                                                                                                    |                  | <ul style="list-style-type: none"> <li>This information will be reviewed by ecological specialists for potential incorporation into faunal sensitivity mapping.</li> </ul> <p>The project's Environmental Management Programme (EMPr) will be updated to reflect the area's ecological sensitivity, and your input regarding endemic invertebrate taxa has been formally recorded as part of the public participation process.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |              |
| Fri 2024/09/13 | As is known, the disappearance of species is often associated with the loss of their habitats, given that a significant part of the entomofauna and, in particular, tipuloid dipterans, are topically confined to aquatic and near-water communities, their loss in the Kleine Cederberg nature reserve will inevitably lead to the disappearance of unique biota. | Vladimir Lantsov | <p>It is important to clarify that the proposed Harmony Dam development is not located within or adjacent to the Kleine Cederberg Nature Reserve, nor do they directly impact the reserve's habitats. However, we recognise the broader ecological principle you raise cumulative habitat fragmentation across a catchment can indirectly affect protected areas, particularly where connectivity between ecological systems is diminished.</p> <p>To mitigate these risks, the following measures are integral to the proposed development:</p> <ul style="list-style-type: none"> <li>Abstraction is limited to surplus winter flows only, with no water taken during low-flow (baseflow) periods, thereby helping to maintain flow regimes that support aquatic and riparian habitat downstream.</li> <li>Development setbacks and riparian buffers have been established in accordance with the Water Use Licence (WUL) and relevant environmental legislation to protect sensitive habitats and natural flow paths.</li> <li>A detailed Maintenance Management Plan (MMP) will guide the rehabilitation of disturbed riparian zones during and after construction.</li> <li>The Environmental Management Programme (EMPr) includes provisions for the long-term monitoring and protection of riparian and aquatic ecosystems.</li> </ul> | EnviroAfrica |

## COMMENTS AND RESPONSE REPORT – HARMONY INSTREAM DAM

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|                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |           | <ul style="list-style-type: none"> <li>A biodiversity monitoring programme will assess ecosystem health, and adaptive management mechanisms will be implemented if any signs of habitat degradation are detected.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |              |
| <b>Water extraction concerns.</b>     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |              |
| <b>Water management transparency.</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |              |
| Sat 2024/09/07                        | <p>I request that you describe the monitoring plan and mechanical systems that will be put in place, both up and downstream, to ensure that water use is monitored and that water is being released to ensure that water is not cut off by the proposed dam. Please explain exactly how, at what point and through which process, any rainfall resulting in runoff is declared surplus? I assume that to make a rational decision you would need to already be in possession of water flow statistics. Please provide these and describe how you are taking the effect of climate change into account in this water-stressed area.</p> | J Buckley | <p>Thank you for your question regarding the monitoring systems, thresholds, and mechanisms for managing water abstraction related to the proposed Harmony Instream Dam.</p> <p>In line with the Water Use Licence (WUL No. 01/E21D/AB/9699), a dedicated monitoring and compliance plan will be implemented to ensure that the ecological water requirements of the Houdenbek River and downstream systems, including the Riet River, are upheld.</p> <p>1. Monitoring Systems for Harmony Dam</p> <p>Flow Measurement and Abstraction Control</p> <ul style="list-style-type: none"> <li>A continuous flow-monitoring system will be installed at the abstraction point on the unnamed tributary of the Houdenbek River.</li> <li>This system will record real-time flow data to verify when abstraction is permissible.</li> <li>Calibrated flow meters and depth gauges will be installed at the Harmony Dam to track abstraction volumes, storage levels, and release events.</li> <li>All monitoring devices must be maintained in good working condition and calibrated at intervals (at least every five years) in accordance with WUL Special Condition 9.1.</li> </ul> <p>Reporting</p> <ul style="list-style-type: none"> <li>The licensee must record all abstraction volumes and submit reports bi-annually to the Department</li> </ul> | EnviroAfrica |

## COMMENTS AND RESPONSE REPORT – HARMONY INSTREAM DAM

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|  |  |  | <p>of Water and Sanitation (DWS) (WUL Appendix II, Condition 7.2).</p> <ul style="list-style-type: none"> <li>• An independent audit of compliance will also be conducted annually.</li> </ul> <p>2. Defining and Managing “Surplus Water” is defined per WUL:</p> <p><i>“Surplus” is defined operationally in the WUL as exceeding specific monthly flow thresholds and EWRs, not based on historical flow perception.</i></p> <p>Abstraction to fill the Harmony Dam is only permitted when there is surplus runoff. This is clearly defined in the WUL as flow that exceeds:</p> <ul style="list-style-type: none"> <li>• The Ecological Water Requirements (EWR) of the river system.</li> <li>• The existing lawful downstream water uses.</li> <li>• A pre-determined monthly flow threshold based on litres per second (L/s).</li> </ul> <p>For example:</p> <ul style="list-style-type: none"> <li>• In July, abstraction to the Harmony Dam is only allowed if the flow in the tributary exceeds 773 L/s. Below this threshold, no abstraction may occur.</li> </ul> <p>These thresholds are monitored using the installed flow sensors, and abstraction must automatically cease if flows fall below the allowed level.</p> <p>3. Climate Change and Flow Variability</p> <p>The Harmony Dam has been designed with the hydrological variability of the region in mind, particularly in light of climate change. Key considerations include:</p> <ul style="list-style-type: none"> <li>• No abstraction during low-flow periods, which are expected to become more frequent under a drying climate.</li> </ul> |  |
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## COMMENTS AND RESPONSE REPORT – HARMONY INSTREAM DAM

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|                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |           | <ul style="list-style-type: none"> <li>The WUL is valid for 10 years but reviewable every 2 years, allowing DWS to update flow thresholds based on changing conditions.</li> <li>The licensee is required to adopt water-saving technologies and to adjust practices as needed to conserve the resource (WUL Appendix II, Condition 6).</li> </ul> <p>The hydrological model includes allowances for climate change by using conservative runoff projections based on recent rainfall variability.</p> <p><b>Conclusion</b><br/>The Harmony Dam will operate under a strict regulatory framework that prohibits abstraction during ecologically sensitive periods and ensures that flows to downstream users and ecosystems are maintained. These controls, together with long-term monitoring and compliance mechanisms, are designed to safeguard the sustainability of the catchment, including the Riet River.</p> <p>Your concerns regarding water availability, habitat protection, and the role of climate change have been noted and will be included in the Comments and Response Report as part of the EIA process.</p> |              |
|                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |              |
| <b>Ecological and economic impact</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |              |
| Sat 2024/09/07                        | The Houdenbek river feeds into the Riet Rivier.<br>- There is extensive agriculture in this catchment area and the groundwater use exceeds recharge, thus, groundwater levels have dropped alarmingly. Groundwater contributes significantly to base river flow. There is no account for the downstream ecological impact of restricted flow in the river. It will also have a direct impact on farms and jobs through the area in which the Riet River flows. There is no | J Buckley | Protecting ecological baseflow and the ecosystems and communities that depend on it has been a core focus of the licensing and impact assessment process for the proposed Harmony Dam. The Freshwater Impact Assessment and the associated Water Use Licence (WUL No. 01/E21D/AB/9699) explicitly recognise the role that groundwater discharge plays in sustaining baseflows, especially during dry periods.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | EnviroAfrica |

## COMMENTS AND RESPONSE REPORT – HARMONY INSTREAM DAM

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|  | <p>account for the impact on the wildlife and river life.</p> |  | <p>To safeguard these systems, the following measures have been built into the project:</p> <p>Hydrological Protections</p> <ul style="list-style-type: none"> <li>• Abstraction from the tributary is strictly prohibited during baseflow or low-flow conditions, as per WUL conditions.</li> <li>• Water may only be abstracted during verified high-flow events, defined using monthly Ecological Water Requirement (EWR) thresholds.</li> <li>• Real-time flow monitoring infrastructure will be installed to ensure that abstraction occurs only when flows exceed the pre-determined limits (e.g., 773 L/s in July).</li> </ul> <p>Groundwater and Cumulative Stress Considerations</p> <ul style="list-style-type: none"> <li>• The Harmony Dam project does not involve direct groundwater abstraction.</li> <li>• However, the WUL requires ongoing hydrological monitoring to assess cumulative flow conditions, including: <ul style="list-style-type: none"> <li>○ Installation of flow gauging and metering systems,</li> <li>○ Reporting of abstraction volumes and timing, and</li> <li>○ Submission of records to the Department of Water and Sanitation.</li> </ul> </li> <li>• Coordination with the Koue Bokkeveld Water User Association and regional water managers may occur in future project phases to address cumulative aquifer stress at the catchment scale.</li> </ul> <p>Ecological and Compliance Safeguards</p> <ul style="list-style-type: none"> <li>• The WUL includes monthly EWR thresholds, which must be satisfied before any abstraction is permitted.</li> </ul> |  |
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## COMMENTS AND RESPONSE REPORT – HARMONY INSTREAM DAM

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|  |  |  | <ul style="list-style-type: none"> <li>• The Freshwater Specialist Report assessed the potential for cumulative ecological degradation and helped define: <ul style="list-style-type: none"> <li>○ Conservative abstraction volumes (250,000 m<sup>3</sup>/year for Harmony),</li> <li>○ No-go zones, and</li> <li>○ Strict operational conditions.</li> </ul> </li> <li>• The Environmental Management Programme (EMPr) and the cumulative impact review are being addressed in the EIA will include: <ul style="list-style-type: none"> <li>○ A biodiversity monitoring programme, focused on riparian and aquatic species health,</li> <li>○ Erosion and sedimentation controls, and</li> <li>○ Rehabilitation of disturbed vegetation, particularly in riparian areas.</li> </ul> </li> </ul> <p>Adaptive Management and Compliance</p> <ul style="list-style-type: none"> <li>• The WUL is valid for 10 years but is reviewable every two years, allowing DWS to adjust licence conditions if evidence of ecological or socioeconomic harm emerges.</li> <li>• Required mitigation includes: <ul style="list-style-type: none"> <li>○ Maintenance of buffer zones,</li> <li>○ Control of invasive plant species,</li> <li>○ Avoidance of further habitat loss, and</li> <li>○ Development of a Plant Species Management Plan.</li> </ul> </li> </ul> <p>Should monitoring detect downstream degradation, whether ecological or user-related, corrective actions will be required, including:</p> <ul style="list-style-type: none"> <li>• Operational adjustments to the dam and abstraction schedule,</li> <li>• Restoration interventions, and</li> <li>• Where necessary, compensatory measures to affected water users or ecosystems.</li> </ul> |  |
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## COMMENTS AND RESPONSE REPORT – HARMONY INSTREAM DAM

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| Thur 2024/09/05 | There is no account of the downstream ecological impact of the proposed dams, which will restrict flow in the rivers in the catchment areas, with a direct impact on properties through which the Riet River flows, such as Zeekoegat. There is no account for the impact on the wildlife and river life. | Dr David A.H. Buckley | <p>We would like to clarify that the Freshwater Impact Assessment, commissioned as part of the Environmental Impact Assessment (EIA) process, specifically evaluated downstream risks, including potential effects on aquatic species, river connectivity, and ecological flow requirements within the Houdenbek and Riet River catchments.</p> <p>Key Findings:</p> <ul style="list-style-type: none"> <li>The direct ecological impact at the Harmony Dam site is considered limited, due to prior agricultural disturbance and the absence of perennial wetlands within the inundation zone.</li> <li>However, the cumulative effect of reduced downstream flow, particularly in the already water-stressed Riet River, was identified as a significant concern.</li> </ul> <p>Safeguards in the Water Use Licence (WUL No. 01/E21D/AB/9699):</p> <p>To prevent negative downstream impacts on properties such as Zeekoegat and to protect aquatic ecosystems, the Department of Water and Sanitation (DWS) has imposed strict, enforceable conditions:</p> <ul style="list-style-type: none"> <li>Abstraction is limited to verified high-flow (flood) events and is prohibited during low-flow or baseflow conditions to protect both ecological and user needs.</li> <li>Abstraction may only occur once measured flows exceed monthly ecological thresholds (e.g., 773 L/s in July), thereby preserving essential flow to sustain permanent pools, aquatic habitats, and downstream water rights.</li> </ul> | EnviroAfrica |
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## COMMENTS AND RESPONSE REPORT – HARMONY INSTREAM DAM

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|                                           |                                                                                                                                                                                                                                                                                    |           | <ul style="list-style-type: none"> <li>Calibrated flow monitoring systems must be installed upstream and downstream of abstraction points, with bi-annual reporting required to DWS.</li> </ul> <p>Additional Biodiversity and Habitat Protections:</p> <ul style="list-style-type: none"> <li>The Environmental Management Programme (EMPr) includes requirements for: <ul style="list-style-type: none"> <li>A Plant Species Management Plan and riparian buffer zones to maintain ecosystem integrity.</li> <li>Invasive species control to support the recovery and persistence of indigenous plant and animal species.</li> <li>Monitoring protocols to track potential ecological decline caused by altered flow regimes or construction-related disturbance.</li> </ul> </li> </ul> <p>Summary</p> <p>These measures have been designed to ensure that downstream ecological processes, aquatic life, and water users are not adversely affected.</p> |              |
| <b>Environmental degradation concerns</b> |                                                                                                                                                                                                                                                                                    |           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |              |
| Sat 2024/09/07                            | We object to the clearance of the indigenous vegetation for the purposes of the proposed agricultural lands and dam. This is in an area where there are sensitive plants, reptiles and mammals, which are already under huge stress from the agricultural development in the area. | J Buckley | <p>Thank you for your comment regarding the clearance of indigenous vegetation for the proposed Harmony Dam and associated agricultural expansion. The concern about biodiversity loss, particularly in an area already under pressure from existing agricultural development, is fully acknowledged and was a central focus of the environmental assessment process.</p> <p>1. Botanical Sensitivity of the Site</p> <ul style="list-style-type: none"> <li>The Botanical Impact Assessment confirmed that the proposed development footprint falls within two vegetation types: <ul style="list-style-type: none"> <li>Winterhoek Sandstone Fynbos (not listed as threatened), and</li> </ul> </li> </ul>                                                                                                                                                                                                                                                  | EnviroAfrica |

## COMMENTS AND RESPONSE REPORT – HARMONY INSTREAM DAM

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|  |  |  | <ul style="list-style-type: none"> <li>○ Kouebokkeveld Alluvium Fynbos, which is listed as Critically Endangered under the National List of Ecosystems that are Threatened and in Need of Protection (GN 2747 of 2022).</li> <li>• While some of the proposed agricultural area overlaps with previously disturbed land, the inundation area of the Harmony Dam and adjacent natural areas includes intact indigenous vegetation of conservation value.</li> </ul> <p>2. Faunal Considerations</p> <ul style="list-style-type: none"> <li>• The site falls within a Critical Biodiversity Area (CBA) and an Ecological Support Area (ESA1), which are important for maintaining ecological processes and habitat connectivity.</li> <li>• The Freshwater and Botanical assessments noted that the area provides potential habitat for sensitive reptile and small mammal species.</li> <li>• However, no Species of Conservation Concern (SCCs) were observed within the proposed footprint during site surveys, although the potential presence of such species is recognised.</li> </ul> <p>3. Mitigation and Offsets</p> <p>To address these impacts, the project includes several mitigation measures:</p> <ul style="list-style-type: none"> <li>• Avoidance of the most sensitive habitat, where feasible, during final layout refinement.</li> <li>• No-go buffer zones around key ecological and heritage features, including sensitive drainage lines and rock art sites.</li> <li>• Indigenous vegetation rehabilitation around the dam embankment and disturbed areas post-construction.</li> <li>• Invasive alien plant control across the property to reduce competitive pressure on native flora.</li> </ul> |  |
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## COMMENTS AND RESPONSE REPORT – HARMONY INSTREAM DAM

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|                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |           | <ul style="list-style-type: none"> <li>A Plant Species Management Plan will guide the rescue and potential translocation of conservation-significant species, where applicable.</li> </ul> <p>Additionally, the environmental process has considered CapeNature's recommendation that if the development proceeds, a long-term stewardship or conservation offset mechanism should be considered to compensate for unavoidable habitat loss in this Mountain Catchment Area, which is also a Protected Area under NEMPAA.</p> <p>4. Monitoring and Compliance</p> <ul style="list-style-type: none"> <li>An Environmental Management Programme (EMPr) will be implemented during both construction and operation, with dedicated biodiversity monitoring protocols.</li> <li>All activities will be subject to compliance auditing, and corrective actions will be required if biodiversity degradation is observed.</li> </ul> |              |
| <b>Job creation and impact</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |              |
| Sat 2024/09/07                 | I request that you provide quantitative information on exactly what, if any, benefit there will be to the local community in terms of the numbers of seasonal or permanent jobs resulting from this enterprise. The practice of using non-local labour in the area is well established. Much is made of the BBEEE status of the applicant and the unquantified number of jobs that will be created. Nothing is said of the cost of lost jobs further down the river, when the water for those farms dries up. | J Buckley | <p>Preliminary planning estimates indicate the following:</p> <p><u>Construction Phase (temporary jobs):</u><br/>Short-term employment opportunities are expected to be created during the dam and infrastructure construction phase. These will include general labour, security, machine operation, and site support roles.</p> <p><u>Operational Phase (long-term jobs):</u><br/>The proposed agricultural expansion will generate an permanent jobs, with additional seasonal jobs during peak planting and harvesting periods. These roles will include farm workers, irrigation managers, maintenance personnel, and support services.</p> <p><u>Skills development:</u></p>                                                                                                                                                                                                                                              | EnviroAfrica |

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|                                  |                                                                                                                                                                                                                                                             |           | <p>The project will incorporate on-site training for irrigation and land preparation to promote upskilling of local workers, with a view to long-term employment sustainability.</p> <p>Your concern about the potential for downstream job losses due to reduced water availability is also recognised. The Freshwater Impact Assessment and the terms of the Water Use Licence (WUL No. 01/E21D/AB/9699) address this by:</p> <ul style="list-style-type: none"> <li>• Strictly limiting water abstraction to surplus winter flows and prohibiting abstraction during baseflow periods to protect downstream users.</li> <li>• Requiring flow monitoring and compliance auditing to ensure that no interruption occurs to water availability beyond the licensed thresholds.</li> <li>• Mandating that abstraction cease when minimum environmental flows are not met, thereby preserving ecological and agricultural sustainability downstream.</li> </ul> <p>These conditions will be put in place to prevent adverse downstream economic impacts, including on jobs dependent on a stable irrigation supply.</p> |              |
| <b>Final report review</b>       |                                                                                                                                                                                                                                                             |           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |              |
| Sat 2024/09/07                   | In April 2012, a Final Project Report was completed by the Department of Water Affairs Chief Directorate. Here are a few points from the Report:                                                                                                            | J Buckley | Noted.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | EnviroAfrica |
| <b>Water usage restrictions.</b> |                                                                                                                                                                                                                                                             |           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |              |
| Sat 2024/09/07                   | <p>Koue Bokkeveldd IUA, which has 2% of the population accounts for 18% of the water usage in the WMA"</p> <p>"No large dams or large water wier development on the mainstream of the Doring, Groot, Riet, Verlorenvlei, Langvlei, Jakkels and Papkuils</p> | J Buckley | The Koue Bokkeveld Irrigation Use Area (IUA), although representing only approximately 2% of the population within the Olifants-Doorn Water Management Area (WMA), accounts for a disproportionately high 18% of total water use. This imbalance is noted in the Olifants-Doorn Catchment Management Strategy and reflects                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | EnviroAfrica |

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|  | <p>rivers”</p> <p>“No new licenses for water abstraction in summer (low flow) period of the year in the mainstream of the Olifants upstream of the Clanwilliam Dam, Doring, Groot, Riet, Verlorenvlei, Langvlei, Jakkels and Papkuils rivers.”</p> <p>” The Houdenbeks is fully developed”</p> |  | <p>the region’s history of intensive irrigated agriculture and its reliance on limited water resources.</p> <p>While this underscores the need for cautious and sustainable water allocation, it also explains why new water uses in the area are now subject to strict licensing, volumetric limitations, and continuous monitoring under the revised regulatory framework.</p> <p>Clarification on the Harmony Dam Project:</p> <ul style="list-style-type: none"> <li>• The proposed Harmony Dam is located on a small tributary of the Houdenbek River, which flows into the Riet River system. It is not located on the mainstem of the Riet, Doring, or Olifants Rivers, and does not involve large-scale weir or dam construction on these rivers, which remain restricted under national water policy.</li> <li>• The project was granted a Water Use Licence (WUL No. 01/E21D/AB/9699) based on detailed hydrological modelling, ecological assessment, and stakeholder consultation.</li> <li>• Importantly, the WUL prohibits any abstraction during the summer or low-flow periods. Water may only be abstracted: <ul style="list-style-type: none"> <li>○ During winter months, when flows exceed the Ecological Water Requirement (EWR).</li> <li>○ When downstream users’ existing lawful water use needs are already satisfied.</li> <li>○ And only if real-time flow monitoring confirms that a surplus exists.</li> </ul> </li> <li>• The total authorised abstraction volume for Harmony Dam is 250,000 m<sup>3</sup>/year, which represents a small fraction of the Mean Annual Runoff (MAR) in the local E21D quaternary catchment — less than 1% of MAR on its own.</li> <li>• The WUL further includes:</li> </ul> |  |
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## COMMENTS AND RESPONSE REPORT – HARMONY INSTREAM DAM

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|                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                      | <ul style="list-style-type: none"> <li>○ Mandatory flow gauging and automated monitoring infrastructure.</li> <li>○ Biannual reporting to the Department of Water and Sanitation (DWS).</li> <li>○ And the ability for the licence to be reviewed and amended every two years based on updated flow data or ecological impacts.</li> </ul> <p>Conclusion:<br/>The Harmony Dam project is compliant with the most recent and restrictive water management policies applicable to the Olifants-Doorn WMA. It has been specifically designed and licensed to ensure that:</p> <ul style="list-style-type: none"> <li>• No summer or baseflow abstractions occur.</li> <li>• Downstream ecosystems and users, including the Riet River system, are protected.</li> <li>• And that adaptive management and monitoring systems are in place to detect and respond to any signs of ecological or hydrological stress.</li> </ul> <p>This approach ensures that, even in an already water-stressed catchment, the Harmony Dam will not contribute to further over-allocation or degradation of water resources.</p> |  |
| Sat 2024/09/07 | I have received information that this area is threatened with major anthropogenic interference, namely the creation of dams on a small river flowing here, the floodplain of which, together with small lakes, makes up a significant part of the territory with the existing original water and near-water biocomplexes. Any change by a person of natural conditions leads to a violation of the ecology of plant and animal species living here, and to a deterioration in the state of biodiversity. The creation of dams on the river upstream will lead to the disappearance of | Dr Valentin Tikhonow | It is important to clarify that the proposed Harmony Instream Dam is not located within or adjacent to the Kleine Cederberg Nature Reserve or the Swaruggens Conservancy. While the proposed Harmony Dam is located outside the formal boundaries of the Swaruggens Conservancy, the potential for hydrological and ecological connectivity has been carefully considered in the specialist studies. It is situated on a small tributary of the Houdenbek River, within Farm Houdenbek 415, in the Koue Bokkeveld region, upstream of the confluence with the Winkelhaak River, which flows into the Riet River.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |

## COMMENTS AND RESPONSE REPORT – HARMONY INSTREAM DAM

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|  | <p>the aquatic habitat in the Kleine Cederberg nature reserve, which is part of the Swartruggens Conservancy, the death of representatives of the aquatic flora and fauna, which will affect the entire ecosystem of the region, will have a negative impact on the river system, ecological environment habitats of fish, amphibians, birds and plants not only in the designated region, but also in the surrounding areas hundreds of kilometers downstream.</p> |  | <p>A Freshwater Impact Assessment (FIA) was conducted as part of the pre-application environmental process. This study:</p> <ul style="list-style-type: none"> <li>• Acknowledged the fragility of aquatic and near-water biocomplexes in the broader catchment.</li> <li>• Identified aquatic features (including seasonal channels and riparian habitat) near the proposed Harmony Dam site.</li> <li>• Concluded that while the immediate footprint is of low aquatic ecological value due to historical disturbance, there is a need to prevent degradation of downstream systems, including permanent pools and floodplain habitats.</li> </ul> <p>In response to these risks, the Water Use Licence (WUL No. 01/E21D/AB/9699) issued by the Department of Water and Sanitation (DWS) includes several binding conditions to protect aquatic ecosystems:</p> <p>Key Protective Measures:</p> <ul style="list-style-type: none"> <li>• No abstraction is permitted during baseflow conditions, only during high-flow winter events (surplus water).</li> <li>• Abstraction thresholds based on Ecological Water Requirements (EWRs) must be met monthly before any pumping to the dam can occur.</li> <li>• Real-time flow monitoring infrastructure is mandatory upstream of the abstraction point.</li> <li>• The dam must have release structures capable of restoring environmental flow if required.</li> </ul> <p>These controls are in place to protect aquatic habitat continuity and prevent depletion of downstream ecosystems that rely on sustained river connectivity and seasonal inundation.</p> |  |
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## COMMENTS AND RESPONSE REPORT – HARMONY INSTREAM DAM

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|                                        |                                                                                                                                                                                      |            | <p>Monitoring, Rehabilitation and Adaptive Management</p> <p>In addition to hydrological controls, the Environmental Management Programme (EMPr) includes:</p> <ul style="list-style-type: none"> <li>• Riparian buffer zones and protection of near-water habitats from physical disturbance during construction.</li> <li>• Rehabilitation plans for disturbed areas to re-establish native plant cover.</li> <li>• Biodiversity monitoring (targeting riparian vegetation, amphibians, macroinvertebrates and aquatic species).</li> <li>• The project is also subject to regular external compliance auditing and adaptive review.</li> </ul> <p>Conclusion: Limited Local Impact, Regional Safeguards</p> <p>Although the comment suggests a potential risk to aquatic systems "hundreds of kilometers downstream", the Harmony Dam is relatively small in scale (250,000 m³) and has been designed specifically to align with current national water policy for sensitive areas. There is:</p> <ul style="list-style-type: none"> <li>• No year-round abstraction.</li> <li>• No reduction in baseflow.</li> <li>• And a strict requirement to maintain downstream ecological function through engineering, monitoring, and regulatory oversight.</li> </ul> |              |
| <b>Environmental oversight request</b> |                                                                                                                                                                                      |            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |              |
| Sat 2024/09/07                         | Please explain how DWAF can be completely ignored and ensure that they are asked to comment specifically on these points. I request that the following experts be appointed and that | J. Buckley | We confirm that the Department of Water and Sanitation (DWS), formerly DWAF, is the licensing authority for water use and has been fully involved in the assessment and authorisation process:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | EnviroAfrica |

## COMMENTS AND RESPONSE REPORT – HARMONY INSTREAM DAM

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|  | <p>new studies be done, not just digging up the previous ones:</p> <ul style="list-style-type: none"> <li>▪ Botanical specialist</li> <li>▪ Freshwater specialist</li> <li>▪ Herpetology specialist (In the previous study, the effect on reptiles is glossed over. Note that this general area has tent the tortoises and Karoo dwarf tortoises (and angulates). There are also red adders and armadillo girdled lizards, all of which are worthy of a 'search and rescue' attempt should this development go ahead.)</li> <li>▪ Heritage specialist</li> </ul> |  | <ul style="list-style-type: none"> <li>• The proposed Harmony Dam is governed by Water Use Licence No. 01/E21D/AB/9699, issued by DWS on 27 January 2023, following a formal review of hydrological and ecological impacts associated with the dam.</li> <li>• The licence prohibits abstraction during low-flow periods and requires that abstraction from the tributary to the Houdenbek River may only occur once the monthly Ecological Water Requirements (EWRs) are met. For example, in July, abstraction may only occur when flows exceed 773 L/s.</li> <li>• Flow gauging infrastructure, annual audits, and bi-annual reporting to DWS are mandatory and enforceable.</li> <li>• DWS will be invited again to review and comment on the updated Environmental Impact Assessment (EIA) and specialist reports during the formal public participation period.</li> </ul> <p>The WUL, issued on 27 January 2023, is the product of direct technical review by DWS officials and was granted after submission of:</p> <ul style="list-style-type: none"> <li>• A detailed hydrological model and flow analysis.</li> <li>• A Freshwater Impact Assessment (Watsan Africa, dated 2018).</li> <li>• A Preliminary Design Report and associated engineering calculations.</li> <li>• Confirmation of compliance with instream flow requirements (IFRs) and ecological reserve protection.</li> </ul> <p>Should there be additional concerns or new ecological data arising from the updated EIA process, the DWS will be formally re-engaged for comment and review. Your request for their involvement on specific downstream</p> |  |
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## COMMENTS AND RESPONSE REPORT – HARMONY INSTREAM DAM

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|  |  |  | <p>flow and ecological concerns will be specifically communicated. The following specialist studies have been undertaken to inform the environmental assessment to date:</p> <p><u>Botanical Impact Assessment</u><br/> Title: <i>Botanical Assessment for the proposed Houdenbek Dams and additional agricultural area near Op-die-Berg, Witzenberg Municipality, Western Cape Province (Amended and Updated Report)</i><br/> Author: <i>Dr. David McDonald (Bergwind Botanical Surveys &amp; Tours CC)</i><br/> Date: <i>March 2019; amended April / May 2025</i><br/> Summary: The report evaluates the proposed Harmony Dam site and associated cultivation area, confirming the presence of Winterhoek Sandstone Fynbos at the dam site and Critically Endangered Kouebokkeveld Alluvium Fynbos within the proposed agricultural area. These vegetation types inform mitigation measures and layout decisions for their respective components of the project.</p> <p><u>Freshwater Impact Assessment</u><br/> Title: <i>Freshwater Report Proposed Harmony Agriculture on the Farm Winkelhaak 224, Koue Bokkeveld, Ceres District</i><br/> Author: <i>WATSAN Africa</i><br/> Date: <i>August 2024</i></p> <p>Summary: The Harmony Dam's effects on ephemeral drainage lines and downstream aquatic features are assessed. Flow-dependent mitigation measures are linked to conditions in the Water Use Licence.</p> <p><u>Heritage Impact Assessment (HIA)</u><br/> Title: <i>Proposed Development of the Harmony Instream Dam and Associated Agricultural Area on the</i></p> |  |
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## COMMENTS AND RESPONSE REPORT – HARMONY INSTREAM DAM

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|                                         |                                                                                                                                                                                                                                                                                                                                           |           | <p><i>Remainder of Farm Houdenberg No. 415, Ceres, Witzenberg Local Municipality, Western Cape</i><br/> Author: <i>Jonathan Kaplan (ACRM)</i><br/> Date: <i>October 2024</i><br/> Summary: Identified three archaeological sites (HMY1–3). HMY1 and HMY2 contain Later Stone Age rock art and were graded as Grade IIIA heritage sites. A 40–50 m no-go buffer has been incorporated into the project design.</p> <p>Conclusion<br/> Your request for updated and robust assessments is acknowledged and aligned with the EIA process. All revised specialist reports will be included in the Draft Environmental Impact Report (EIR) and circulated for public review and comment.</p> <p>We further confirm that the DWS will be formally requested to comment again, and any additional input from conservation and biodiversity authorities (e.g., CapeNature) will be integrated before finalisation.</p> <p>These studies formed the basis for regulatory decisions and environmental management conditions, including the terms of the WUL. The reports will be updated as part of the EIA process.</p> |              |
| <b>Stakeholder notification request</b> |                                                                                                                                                                                                                                                                                                                                           |           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |              |
| Sat 2024/09/07                          | As we were not advised of this application, I assume no other neighbours, previous participants and those affected with properties along the river, were either. Please send the notices directly to all these people (you have their email addresses from last time) and allow them time to register their participation in the process. | J Buckley | <p>We confirm that the first round of the Public Participation Process (PPP) was undertaken as part of the project's earlier phases. During this process, all Interested and Affected Parties (I&amp;APS) who registered, submitted comments, or were identified through stakeholder mapping were formally recorded.</p> <p>As the project proceeds into the Scoping and Environmental Impact Assessment (EIA) phase, all</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | EnviroAfrica |

## COMMENTS AND RESPONSE REPORT – HARMONY INSTREAM DAM

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|                                      |                                                                                                                                                                                                                                                         |           | <p>registered I&amp;APS will be notified of the continuation of the process. They will receive:</p> <ul style="list-style-type: none"> <li>• Direct communication via email.</li> <li>• Information on the availability of the reports or a copy of the reports.</li> <li>• An invitation to comment.</li> </ul> <p>In addition to this, advertisements and site notices were placed (a copy of which is attached as an Appendix) to inform any new interested parties of the opportunity to register and participate.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |              |
| <b>Reassessment and transparency</b> |                                                                                                                                                                                                                                                         |           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |              |
| Sat 2024/09/07                       | <p>This development was proposed in 2019 and vigorously opposed. It is disappointing that we are seeing another attempt to get it passed. I urge a thorough and transparent reassessment of the project's viability and environmental implications.</p> | J Buckley | <p>The concerns raised during the initial 2019 proposal were acknowledged, and the current application reflects significant revisions made in response to specialist findings and stakeholder input. As part of the current Environmental Impact Assessment (EIA) process, a comprehensive reassessment is being undertaken, including updated botanical, freshwater, and heritage impact studies. The preferred alternatives for infrastructure layout and dam placement have been modified to minimise environmental and cultural impacts, and mitigation measures have been integrated into the project design.</p> <p>All findings and recommendations will be transparently presented during the Scoping and EIA phases, in accordance with the National Environmental Management Act (NEMA) regulations. Stakeholder participation remains a critical component of this process, and all inputs will be considered in determining the project's viability and acceptability.</p> <p>As part of the current Scoping and Environmental Impact Assessment (EIA) process, the project is being subjected to a comprehensive re-evaluation that includes:</p> | EnviroAfrica |

## COMMENTS AND RESPONSE REPORT – HARMONY INSTREAM DAM

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|                             |                                                                                                                                                                                                                                                                                                                                                                                          |                        | <ul style="list-style-type: none"> <li>• A full public participation process.</li> <li>• A reassessment of environmental, social, and cumulative impacts in line with current conditions and policies.</li> <li>• Additionally, we can confirm that all comments received are being reviewed and considered in the updated environmental documentation.</li> <li>• The Department of Water and Sanitation has also issued a Water Use Licence, which is subject to strict conditions and ongoing compliance monitoring, but this does not exempt the project from full environmental scrutiny.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                              |              |
| <b>Water supply concern</b> |                                                                                                                                                                                                                                                                                                                                                                                          |                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |              |
| Thur 2024/09/05             | Our property is bordered to the east by the Riet River, into which the Houdenbek and Winkelhaak Rivers flow. Any disruption to the flow of the Houdenbek River and its catchment will have a direct impact on the Riet River, negatively impacting on this important water resource for us and others downstream of the river and all the natural systems and creatures that rely on it. | Dr. David A.H. Buckley | <p>You are correct in identifying the Houdenbek and Winkelhaak Rivers as important tributaries that ultimately contribute to the Riet River, a vital water source for both human use and biodiversity. Any development within these upper catchments must carefully consider the risk of flow alteration and its potential downstream impacts on water users and aquatic ecosystems.</p> <p>To specifically protect downstream flow integrity and ecological functioning, the following safeguards will be implemented under the conditions of Water Use Licence (WUL No. 01/E21D/AB/9699):</p> <ul style="list-style-type: none"> <li>• Abstraction is strictly limited to verified high-flow (flood) events, meaning no water may be abstracted during baseflow or low-flow periods when ecological and downstream user demands are highest.</li> <li>• Real-time flow monitoring systems will be installed and maintained at abstraction points to ensure that pumping only occurs once minimum flow thresholds are met.</li> </ul> | EnviroAfrica |

## COMMENTS AND RESPONSE REPORT – HARMONY INSTREAM DAM

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|  |                                                                                                                                                                                                                                                                                                                                                                                            |                            | <ul style="list-style-type: none"> <li>• These flow thresholds are based on maintaining ecological water requirements (EWRs) necessary to sustain downstream habitats and species, including riparian vegetation, aquatic fauna, and species dependent on permanent pools.</li> <li>• Auditing and compliance mechanisms are required as part of the WUL to monitor water use and enforce licence conditions. Corrective actions will be implemented in cases of non-compliance.</li> </ul> <p>The Freshwater Impact Assessment, supported by hydrological analysis, assessed both the direct and cumulative impacts of the Harmony Dam on the broader Riet River system. Based on this, abstraction volumes and operational conditions have been significantly restricted to ensure that downstream water availability and ecosystem health are maintained.</p> <p>As the project progresses through the Environmental Impact Assessment (EIA) phase, your concern will continue to be considered in specialist reviews and will inform the development of mitigation and monitoring strategies within the Environmental Management Programme (EMPr).</p> |              |
|  | <p>The river water is used mainly for domestic purposes up to this point in time.</p> <p>The Houdenbek river feeds into the Riet Rivier. There is extensive agriculture in this catchment area thus the groundwater use exceeds recharge and levels have dropped alarmingly. Groundwater contributes significantly to river base flow. (There has been no flow even after 2019 rains).</p> | Justus & Marguerite Bruwer | <p>Thank you for your comment and for highlighting the importance of the Houdenbek and Riet Rivers for domestic use and ecological sustainability. Your observation regarding declining groundwater levels and reduced river baseflow is valid and reflects broader hydrological stress in the catchment, particularly in the context of extensive agricultural activity.</p> <p>The freshwater specialist study conducted as part of this application recognises the critical role of groundwater in sustaining baseflow, particularly during dry months, and the link between over-abstraction and reduced flow in tributaries such as the Houdenbek River. The report</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | EnviroAfrica |

## COMMENTS AND RESPONSE REPORT – HARMONY INSTREAM DAM

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|  |                                                                                                                                                                                                                                                                                                                  |                                       | <p>also confirms that recent years have seen periods with little to no surface flow, even following substantial rainfall, which may be attributed to both natural variability and cumulative water use impacts.</p> <p>In response to these concerns, the Water Use Licence (WUL) for the proposed Harmony Dam includes several strict conditions to prevent further ecological degradation and protect downstream users:</p> <ul style="list-style-type: none"> <li>• Water may only be abstracted during verified high-flow periods, not during baseflow or dry conditions, thereby limiting the risk of further reduction in river and groundwater-supported flows.</li> <li>• Real-time monitoring and flow thresholds will guide abstraction operations, ensuring environmental flow requirements are maintained.</li> <li>• The project includes no groundwater abstraction, and its operation is designed to rely solely on surplus winter surface runoff, with abstraction volumes significantly limited to reduce cumulative pressure on the catchment.</li> </ul> |                     |
|  | <p>Approximately 95% of water use in the WMA is used in the agricultural sector. The above-mentioned study/report found that future growth in demand for water is therefore likely to be linked to increased demand from the agriculture sector and not due to increased demand linked to population growth.</p> | <p>Justus &amp; Marguerite Bruwer</p> | <p>It is correct that approximately 95% of water use in the Breede-Gouritz Water Management Area (WMA) is allocated to the agricultural sector, as confirmed by multiple strategic water resource assessments.</p> <p>The Harmony Dam proposal aligns with this context, as it is intended to support agricultural activities by storing surplus winter runoff to ensure more reliable irrigation supply during dry months. Importantly, the project does not propose additional water abstraction beyond what is already authorised under the approved Water Use Licence (WUL). Instead, it seeks to optimise the timing and availability of existing water allocations to improve agricultural efficiency while minimising pressure on water resources during low-flow periods.</p>                                                                                                                                                                                                                                                                                       | <p>EnviroAfrica</p> |

## COMMENTS AND RESPONSE REPORT – HARMONY INSTREAM DAM

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|                                 | Groundwater defects after taking surface water EWR low flow into account. The Kouebokke veld ground water exceeds recharge and water levels are dropping. Ground water is shallow. Groundwater supply is at risk.                                                                                        | Justus & Marguerite Bruwer | The freshwater specialist assessment for the proposed Harmony Dam recognises these pressures and notes that any development in the catchment must avoid exacerbating groundwater stress. It is important to clarify that the proposed project does not include any groundwater abstraction. The Harmony Dam will be filled using surplus surface runoff during high-flow (flood) events only, as regulated by the project's Water Use Licence (WUL). Abstraction during low-flow periods, when groundwater-supported baseflow is most critical, is strictly prohibited under the WUL conditions.                                                                                                                                                                                                                                  | EnviroAfrica |
| <b>Water scarcity objection</b> |                                                                                                                                                                                                                                                                                                          |                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |              |
| Sat 2024/09/07                  | Our property relies solely on the Riet River as our source of water, which already struggles to flow consistently. I object to the proposed development due to the insufficient water availability in the river and the potential exacerbation of this issue.                                            | Bruce Johnson              | <p>As part of the freshwater specialist assessment, the impact of the proposed Harmony Dam on downstream flow in the Houdenberg, Winkelhaak, and Riet Rivers was carefully considered. The proposed dam is designed to abstract only surplus water during verified high-flow (flood) events, and not during baseflow or dry periods when downstream needs and ecological flow requirements are most critical. This is a key condition of the approved Water Use Licence (WUL).</p> <p>In addition, ecological flow releases have been recommended to ensure continued flow downstream during low-flow periods, helping to safeguard users such as yourself who are dependent on the Riet River. Flow monitoring and strict compliance requirements will form part of the project's Environmental Management Programme (EMPr).</p> | EnviroAfrica |
|                                 | I do not accept the premise that the water collected in the dams will be "winter surplus", since the catchment did not provide sufficient water to cause the flow in the Riet River for more than 10 years. Previously there was constant flow in the river, not just in winter. The water levels at our | Dr. David A.H. Buckley     | The Freshwater Impact Assessment acknowledges the hydrological challenges in the catchment, including reduced and inconsistent flows over the past decade. It also recognises the ecological and social importance of maintaining baseflows in the Houdenberg and Riet Rivers, particularly given the historical decline in                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | EnviroAfrica |

## COMMENTS AND RESPONSE REPORT – HARMONY INSTREAM DAM

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|  | <p>permanent water holes have been steadily decreasing annually and the situation will be exacerbated if further damming occurs. No account is taken of climate change and the water- stressed nature of the area.</p> |                                       | <p>perennial surface flow and groundwater-supported wetlands.</p> <p>While the project proposes to abstract only during verified high-flow (flood) events, this will be governed by the terms of the Water Use Licence (WUL), which includes:</p> <ul style="list-style-type: none"> <li>• Real-time flow monitoring to ensure that abstraction is triggered only when flows exceed specified thresholds.</li> <li>• No abstraction during baseflow periods or ecologically sensitive low flow conditions.</li> <li>• Ecological flow release requirements to maintain minimum flows and protect aquatic ecosystems and downstream users.</li> </ul> <p>The term “winter surplus water” in this context is not intended to imply an abundance of water or an assumption of regular high flows. Rather, it refers to specific flood conditions during which measurable high-flow thresholds are exceeded.</p> <p>In addition, the project team acknowledges that climate change is likely to intensify seasonal variability and water scarcity. These risks are being integrated into the project design through flow modelling, conservative yield assumptions, and adaptive management provisions to limit over-abstraction during prolonged drought periods.</p> <p>Additionally, the environmental authorisation process includes a review of cumulative water stress and ecological impacts, and your comment will contribute meaningfully to this analysis.</p> |                     |
|  | <p>We, Justus W R Bruwer &amp; Marguerite A Bruwer of the farm De Naauwte, hereby wish to register our objection to the above-mentioned application. De Naaute hereby wishes to</p>                                    | <p>Justus &amp; Marguerite Bruwer</p> | <p>You have been formally registered as Interested and Affected Parties (I&amp;APs) in the environmental assessment process for the proposed Harmony Dam, pipeline, and associated agricultural development. Your</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | <p>EnviroAfrica</p> |

## COMMENTS AND RESPONSE REPORT – HARMONY INSTREAM DAM

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|  | register our objection to the above-mentioned application.                                                                                                                                                                                                                                                                      |                                       | <p>objection to the application on behalf of the farm De Naauwte has been duly noted and will be included in the official Comments and Responses Report as part of the public participation process.</p> <p>As registered, I&amp;APs, you will receive:</p> <ul style="list-style-type: none"> <li>• Notifications of upcoming project milestones.</li> <li>• Access to the Draft Environmental Impact Report (EIR) once released for public review.</li> <li>• Opportunities to submit further comments as the assessment proceeds.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                     |
|  | <p>The farm De Naauwte is severely impacted by the flow of water in the Riet Rivier. The section of the river that runs through our farm has been dry for the past 4 years. Even after the so-called 'good rains' of 2019, the only water available in pods is from the rain runoff. The river is our only source of water.</p> | <p>Justus &amp; Marguerite Bruwer</p> | <p>The environmental assessment team recognises that the Riet River is the sole source of water for many downstream users, and that its ecological and hydrological function has been significantly reduced in recent years. The Freshwater Impact Assessment has carefully evaluated this context and confirms that any further abstraction in the upper catchment must be strictly limited and highly regulated to avoid exacerbating existing conditions.</p> <p>Accordingly, the proposed Harmony Dam is subject to strict conditions in its Water Use Licence (WUL), including:</p> <ul style="list-style-type: none"> <li>• Abstraction is limited only to surplus high-flow events.</li> <li>• Prohibition of water abstraction during low or baseflow conditions, when downstream users like yourself are most dependent on available flows.</li> <li>• Inclusion of ecological flow releases to maintain some level of water movement downstream.</li> <li>• Real-time monitoring and compliance auditing to enforce these limits.</li> </ul> <p>These measures are specifically intended to protect downstream flows and prevent any further decline in</p> | <p>EnviroAfrica</p> |

## COMMENTS AND RESPONSE REPORT – HARMONY INSTREAM DAM

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|  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                            | river conditions for users like De Naauwte. Your comment and objection have been formally recorded and will be incorporated into the Environmental Impact Report (EIR).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |              |
|  | <p>All farmers/ farms affected have the same right to water. Therefore, more large/ storage dams will have further severe implications for our human consumption and for the wildlife on our farm not to mention the fish species endemic to the Riet Rivier. Winter overflow/surplus is never guaranteed and is required to supply the extremely dry Riet River and further downstream Doorn River. Water stored in dams is regarded as water used. Please be so kind as to acknowledge receipt of this email and letter of objection. Thus, again, we cannot stress enough the importance of no additional dams or enlargement of existing dams within the Olifants Doorn Water Management Area/ Swartruggens Conservancy Area. The irrigated area for the Koue Bokkeveld as a whole is approximately 8 600 but cannot be increased by 15% in all areas. The Houdembeks is fully developed and therefore should not be awarded a license for further increased irrigation or storage. Please be so kind as to acknowledge receipt of this email and letter of objection.</p> | Justus & Marguerite Bruwer | <p>We hereby formally acknowledge receipt of your submission and confirm that you have been registered as an Interested and Affected Party (I&amp;AP) in the Environmental Impact Assessment (EIA) process.</p> <p>Your concerns regarding equitable water access, ecological protection, and the cumulative impact of additional storage dams within the Olifants-Doorn Water Management Area and Swartruggens Conservancy Area are fully noted. While the proposed Harmony Dam is located outside the formal boundaries of the Swartruggens Conservancy, the potential for hydrological and ecological connectivity has been carefully considered in the specialist studies.</p> <p>We agree with your statement that all farms and farmers in the region have equal rights to access water. The potential cumulative impact of additional large or storage dams on downstream water availability for human consumption, livestock, and wildlife is a key consideration in both the environmental and regulatory review processes. We acknowledge your concern that winter surplus flows are not guaranteed, particularly under changing climate conditions.</p> <p>The proposed Harmony Dam is subject to strict regulation under Water Use Licence (WUL No. 01/E21D/AB/9699), which includes:</p> <ul style="list-style-type: none"> <li>• Abstraction limits are based on high-flow (flood) events only, with no abstraction allowed during baseflow periods.</li> <li>• Real-time flow monitoring to ensure compliance.</li> </ul> | EnviroAfrica |

## COMMENTS AND RESPONSE REPORT – HARMONY INSTREAM DAM

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|                 |                                                                                                                                                                                                               |                 | <ul style="list-style-type: none"> <li>• Ecological flow release provisions to maintain critical downstream flow.</li> <li>• No expansion of the total irrigated footprint beyond what is authorised.</li> </ul> <p>Must comply with all licensing, ecological, and hydrological thresholds established by the Department of Water and Sanitation.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |              |
| Thur 2024/09/12 | I would like to be registered as an interested party for this proposed development and would like to be informed on all decisions made for this project.                                                      | Junita Willmans | We hereby formally acknowledge receipt of your submission and confirm that you have been registered as an Interested and Affected Party (I&AP) in the Environmental Impact Assessment (EIA) process.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | EnviroAfrica |
| Thur 2024/09/12 | I therefore object to dam building, draining river systems and habitat destruction by ploughing up natural habitat for agriculture and destroying the Swart Ruggens Conservancy and ecological water systems. | Junita Willmans | <p>Your objection to the proposed Harmony Dam, pipeline, and associated agricultural development has been formally recorded as part of the Environmental Impact Assessment (EIA) process, and you have been registered as an Interested and Affected Party (I&amp;AP). Your concern for the integrity of the Swartruggens Conservancy and broader ecological infrastructure is noted and shared by the project team and regulatory authorities. While the proposed Harmony Dam is located outside the formal boundaries of the Swartruggens Conservancy, the potential for hydrological and ecological connectivity has been carefully considered in the specialist studies.</p> <p>While the proposed development is not located within the boundaries of the conservancy, we acknowledge that ecological impacts can extend beyond the immediate project footprint, especially when river systems are involved. To address the environmental concerns raised:</p> <p>The project has been issued a Water Use Licence (WUL No. 01/E21D/AB/9699) with strict conditions to limit abstraction to winter flood flows only, thereby avoiding any reduction in baseflow or dry-season flow needed to</p> | EnviroAfrica |

## COMMENTS AND RESPONSE REPORT – HARMONY INSTREAM DAM

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|                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                        | <p>sustain downstream ecosystems.</p> <p>The project is subject to an Environmental Management Programme (EMPr) that includes:</p> <ul style="list-style-type: none"> <li>• Limits on vegetation clearance.</li> <li>• Habitat sensitivity mapping to avoid intact natural areas.</li> <li>• Rehabilitation and alien species control measures.</li> <li>• Compliance monitoring and oversight by the relevant authorities.</li> </ul> <p>Your objection will be included in the Comments and Responses Report and will directly inform:</p> <ul style="list-style-type: none"> <li>• The assessment of cumulative ecological impact.</li> <li>• The final recommendations in the Environmental Impact Report (EIR).</li> <li>• Regulatory review by the competent authority, including CapeNature and the Department of Water and Sanitation.</li> </ul> |              |
| <b>Threat to water quality.</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |              |
| Thur 2024/09/05                 | <p>We rely on the permanent water holes of the Riet River which are threatened with silting and encroachment of reeds should the flow of the river be reduced. We have already seen a cessation of the annual winter flows of the Riet River, which in past years helped to clear the build-up of sand, silt and reeds in the riverbed. This proposed dam will only exacerbate this situation and further compromise the ecology of this river.</p> | Dr. David A.H. Buckley | <p>The freshwater specialist assessment for the Harmony Dam has identified reduced flow downstream, particularly in the Riet River, as a significant potential impact. The report notes that natural sediment transport and channel maintenance processes rely on seasonal flow variability, especially during winter, and acknowledges that diminished flow can lead to the silting up of pools, excessive reed growth, and a decline in aquatic habitat quality.</p> <p>To address these concerns, the project's Water Use Licence (WUL) includes several conditions aimed at protecting downstream ecological processes:</p> <ul style="list-style-type: none"> <li>• Water abstraction is strictly limited to verified high-flow periods to preserve natural baseflow and allow sediment-transporting floods to occur.</li> </ul>                     | EnviroAfrica |

## COMMENTS AND RESPONSE REPORT – HARMONY INSTREAM DAM

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|                 |                                                                                                                                                                                                               |                 | <ul style="list-style-type: none"> <li>• Ecological flow releases will be required to support downstream habitat integrity, including maintenance of permanent waterholes.</li> <li>• Monitoring and adaptive management will be implemented through the Environmental Management Programme (EMPr) to assess ongoing flow and sediment dynamics.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |              |
| Thur 2024/09/12 | I therefore object to dam building, draining river systems and habitat destruction by ploughing up natural habitat for agriculture and destroying the Swart Ruggens Conservancy and ecological water systems. | Junita Willmans | <p>The Environmental Impact Assessment (EIA) process has been undertaken specifically to assess these issues. Specialist studies—including botanical, freshwater, and heritage impact assessments—have identified that:</p> <ul style="list-style-type: none"> <li>• The proposed dam would result in the loss of Winterhoek Sandstone Fynbos, and the proposed cultivation area overlaps with Critically Endangered Kouebokkeveld Alluvium Fynbos.</li> <li>• Portions of the development fall within a Critical Biodiversity Area (CBA) and Ecological Support Area (ESA), as well as a proclaimed mountain catchment area.</li> <li>• The freshwater systems in the region are ecologically sensitive and already under pressure from cumulative abstraction and land use change.</li> </ul> <p>In response to these findings, several mitigation and avoidance measures have been proposed, including:</p> <ul style="list-style-type: none"> <li>• Selecting the least environmentally damaging alternative dam layout.</li> <li>• Excluding the most sensitive vegetation areas from development.</li> <li>• Implementing ecological flow releases to sustain downstream water systems.</li> <li>• Including a 40–50 m no-go buffer to protect cultural heritage resources.</li> <li>• Developing a biodiversity offset strategy where irreversible loss is unavoidable.</li> </ul> | EnviroAfrica |

## COMMENTS AND RESPONSE REPORT – HARMONY INSTREAM DAM

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|                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                            | Your comment will be considered during the compilation of the Environmental Impact Report (EIR) and reviewed by the relevant authorities.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |              |
| <b>Repetition of opposition</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |              |
| Thur 2024/09/05                 | This development was proposed in 2019 and vigorously opposed. It is disappointing that we are seeing another attempt to get this passed.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Dr. David A.H. Buckley     | <p>We understand your disappointment in seeing the project resubmitted and wish to assure you that this new application is being processed as a completely fresh assessment, subject to:</p> <ul style="list-style-type: none"> <li>• Updated environmental legislation and regulatory requirements.</li> <li>• Engagement of registered Interested and Affected Parties (I&amp;APS).</li> <li>• Comprehensive reassessment through the current Scoping and Environmental Impact Assessment (EIA) process.</li> </ul> <p>All public concerns from both past and current rounds of consultation are being fully considered, and the final outcome will be determined by the competent authorities based on environmental merits, legal compliance, and stakeholder input.</p> | EnviroAfrica |
| <b>Citing 2012 report</b>       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |              |
|                                 | Please take note that in April of 2012, the Final Project Report done by the Department of Water Affairs, Chief Directorate: Resource Directed Measure, and we quote a few points mentioned in the Report. Koue Bokkeveldd IUA, which has 2% of the population, accounts for 18% of the water usage in the WMA. "No large dams or large water weir development on the mainstream of the Doring, Groot, Riet, Verlorenvlei, Langvlei, Jakkels and Papkuils rivers" No new licenses for water abstraction in summer (low flow) period of the year in the mainstream of the Olifants upstream of the Clanwilliam Dam, Doring, Groot, Riet, | Justus & Marguerite Bruwer | <p>The concerns you raise reflect broader strategic water resource management objectives in the Olifants-Doorn Water Management Area (WMA), including the recognition that areas such as the Koue Bokkeveld IUA, while home to a small portion of the population, account for a disproportionately high share of total water use. The report's guidelines against new large dams and abstraction during the low-flow summer period in the Doring, Groot, Riet, and related rivers remain critical reference points for evaluating new developments.</p> <p>The proposed Harmony Dam has been reviewed within this context, and the following conditions have been</p>                                                                                                        | EnviroAfrica |

## COMMENTS AND RESPONSE REPORT – HARMONY INSTREAM DAM

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|                                          | <p>Verlorenvlei, Langvlei, Jakkels and Papkuils rivers.” “The Houdenbeks are fully developed.” This, in a nutshell, should explain the reason why proposed dams should not be permitted.</p>                                                                                                                                            |                   | <p>applied in line with national water resource management principles:</p> <ul style="list-style-type: none"> <li>• A Water Use Licence (WUL) has been issued, which strictly prohibits abstraction during the summer (low flow) season.</li> <li>• The licence limits abstraction to surplus winter flows, in line with the strategic recommendation to protect baseflows and aquatic ecosystems.</li> <li>• No abstraction will occur on the mainstream of the Riet River, and the dam is located on a tributary within an already modified sub-catchment.</li> <li>• The licence includes requirements for real-time flow monitoring, ecological flow releases, and compliance auditing to safeguard downstream flows and users.</li> </ul> <p>While it is recognised that the Houdenbeks catchment is already highly developed, the current application was subject to fresh specialist review and updated environmental assessments to ensure it aligns with current water management regulations and ecological thresholds.</p> <p>Your objection and reference to long-standing policy positions will be included in the final assessment and taken into full consideration by the competent authority when determining the environmental viability of the proposed development.</p> |              |
| <b>Request for botanical assessment.</b> |                                                                                                                                                                                                                                                                                                                                         |                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |              |
| Wed 2024/09/18                           | <p>I hereby formally request to be registered as an I&amp;AP regarding the proposals to construct the Toeka and Harmony dams on Farm Houdenbek no. 415 (Ceres). As a systematic botanist, conservationist, and consultant, I am concerned about the potential ecological impact that the construction of these two dams would have,</p> | Dr Brian du Preez | <p>We hereby formally acknowledge receipt of your submission and confirm that you have been registered as an Interested and Affected Party (I&amp;AP) in the Environmental Impact Assessment (EIA) process.</p> <p>We appreciate your contribution as a systematic botanist and conservationist, and especially your input</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | EnviroAfrica |

## COMMENTS AND RESPONSE REPORT – HARMONY INSTREAM DAM

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|                                        | <p>particularly on the indigenous flora of the region. I trust that you have appointed a suitably competent botanist to assess the botanical diversity of the proposed development footprints. Of particular interest within that region is a newly described, highly localised <i>Aspalathus</i> species, <i>Aspalathus jardinii</i> Du Preez &amp; C.H. Stirt., which I described earlier this year. It is endemic to deep sand dunes of the Riet Rivier and potentially surrounding areas and may thus occur within the proposed development footprint. It is provisionally listed as being Endangered but has yet to be formally assessed and thus is not included among the sensitive plant species in the online screening tool report. I include the relevant literature for you and your appointed botanical specialist.</p> |                   | <p>regarding <i>Aspalathus jardinii</i> Du Preez &amp; C.H. Stirt., a recently described localised species of high conservation interest. Your note that the species is not yet reflected in the national screening tool due to its provisional conservation status is particularly valuable.</p> <p>We can confirm that a qualified and independent botanical specialist, Dr. David McDonald of Bergwind Botanical Surveys &amp; Tours CC, has been appointed to conduct the botanical assessment for the project. His report does note the potential presence of <i>Aspalathus jardinii</i> in the area, although no individuals were positively identified during the initial survey, which was conducted outside the flowering season. The report specifically recommends a focused seasonal survey to verify its presence or absence within the development footprint, particularly in areas with deep sandy substrates.</p> <p>The literature you've provided will be forwarded to the botanical specialist and included in the project record to assist with ongoing assessments.</p> |              |
| <b>Concern for biodiversity impact</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |              |
| Wed 2024/09/18                         | <p>I am affected by the decisions made by this project due to the conservation of this succulent karoo that needs to be protected overlapped with Kouebokkeveld with its massive diversity and sensitive eco system. I am very concerned about the effect it will have on the biodiversity and natural landscapes.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Dr Brian du Preez | <p>We are committed to ensuring that this newly described and potentially endangered species is afforded the necessary attention and protection throughout the environmental assessment and development process.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | EnviroAfrica |
| Wed 2024/09/18                         | <p>The regional fauna is characterized by an unusually high level of endemism, which is unprecedented for biotas and reaches, according to rough estimates, up to 80%.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Vladimir Lantsov  | <p>While the current scope of the Environmental Impact Assessment (EIA) has focused primarily on botanical, freshwater, and heritage assessments, your observation reinforces the importance of ensuring that all development within this sensitive landscape considers faunal biodiversity as part of its broader ecological context.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | EnviroAfrica |

## COMMENTS AND RESPONSE REPORT – HARMONY INSTREAM DAM

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|                                     |                                                                                                                                                                                                                                                                                                                               |                  | <p>The specialist freshwater report does acknowledge the presence of endemic fish species, such as the Clanwilliam yellowfish (<i>Labeobarbus seeberi</i>) and Cape galaxias (<i>Galaxias zebratus</i>), both of which are of conservation concern. In addition, the botanical and ecological assessments consider habitat integrity as a proxy for supporting a broader range of biodiversity, including endemic fauna.</p> <p>Your comment will be included in the record for further consideration, and we will ensure that the Environmental Management Programme (EMPr) reflects the need to preserve critical habitat that supports endemic and threatened species.</p>                                                                                                                                                                                                                                      |              |
| <b>Threat to the nature reserve</b> |                                                                                                                                                                                                                                                                                                                               |                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |              |
| Wed 2024/09/18                      | I have recently learned that the unique private nature reserve of South Africa Kleine Cederberg, which is part of the Swartruggens Nature Reserve, is in great danger due to the possible construction of dams, which could lead to a change in the water regime of the territory and the loss of unique natural communities. | Vladimir Lantsov | <p>It is important to clarify that the proposed development is not located within the boundaries of the Kleine Cederberg or Swartruggens reserves, but rather within the Houdenbek catchment, which ultimately contributes to the Riet River system. While there is no direct infrastructure proposed within the reserves, we fully acknowledge that indirect impacts on hydrology and downstream ecological processes must be assessed with care. As part of the environmental assessment process:</p> <p>The Freshwater Impact Assessment specifically addresses potential cumulative and downstream effects on river flow, baseflow maintenance, and habitat continuity.</p> <p>To minimise hydrological and ecological disruption:</p> <ul style="list-style-type: none"> <li>The Water Use Licence (WUL) for the Harmony Dam strictly limits water abstraction to surplus winter high-flow events.</li> </ul> | EnviroAfrica |

## COMMENTS AND RESPONSE REPORT – HARMONY INSTREAM DAM

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|                                   |                                                                                                                                                                                                                                                                                                                     |                  | <ul style="list-style-type: none"> <li>No abstraction is permitted during baseflow or low-flow periods, in recognition of the importance of these flows for sustaining downstream biodiversity.</li> <li>Ecological flow releases and real-time flow monitoring are required to help maintain downstream river health.</li> <li>These measures aim to reduce the risk of altering the hydro-ecological regime that supports sensitive areas like the Swartruggens Nature Reserve and associated private conservation lands.</li> </ul> <p>Your concern regarding the possible disruption of ecological balance in the Kleine Cederberg and surrounding conservation areas has been formally recorded in the Comments and Responses Report and will be reviewed by both the environmental assessment team and the relevant regulatory authorities.</p>                                                                                         |              |
| <b>Focus on Insect Protection</b> |                                                                                                                                                                                                                                                                                                                     |                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |              |
| Wed 2024/09/18                    | In connection with the fact that for many years I have been studying tipuloid dipterans and participated in the compilation of several regional Red Books (Northern Caucasus), the issues of protecting this group of dipteran insects are the closest to me and it is to them that I would like to draw attention. | Vladimir Lantsov | <p>We acknowledge your request to draw attention specifically to the conservation needs of tipuloid dipterans, a group of insects that often receive limited consideration in conventional environmental assessments, despite their importance as bioindicators and their specialised habitat requirements.</p> <p>While the current Environmental Impact Assessment (EIA) has concentrated on botanical, freshwater, and heritage impacts, your input underscores the need to consider invertebrate diversity and habitat sensitivity, particularly in fynbos and aquatic edge environments that may be inundated or altered by dam construction.</p> <p>Your submission will be:</p> <ul style="list-style-type: none"> <li>Shared with the ecological and botanical specialists currently contributing to the EIA process.</li> <li>Formally included in the Comments and Responses Report and biodiversity sensitivity review.</li> </ul> | EnviroAfrica |

## COMMENTS AND RESPONSE REPORT – HARMONY INSTREAM DAM

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|                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                  | <ul style="list-style-type: none"> <li>Considered in any updates to the Environmental Management Programme (EMPr), particularly regarding wetland habitat protection and microhabitat preservation.</li> </ul>                                                                                                                                                                                                                                                                                                                                                          |              |
| Wed 2024/09/18  | Crane flies (Tipuloidea) are a group of families of long-horned dipterans, the world fauna of which includes 15,726 species (Oosterbroek, 2024).                                                                                                                                                                                                                                                                                                                                                                                                 | Vladimir Lantsov | <p>This information will be:</p> <ul style="list-style-type: none"> <li>Included in the Comments and Responses Report.</li> <li>Shared with the appointed faunal and freshwater specialists.</li> </ul> <p>Reflected in the biodiversity risk and cumulative impact sections of the Environmental Impact Report (EIR).</p>                                                                                                                                                                                                                                              | EnviroAfrica |
| Wed 2024/09/18  | In South Africa, 258 species of crane flies (Oosterbroek, l.c.) have been identified to date, and a certain proportion of these species certainly live in the Swartruggens Nature Reserve, part of which is located within the Kleine Cederberg Reserve.                                                                                                                                                                                                                                                                                         | Vladimir Lantsov | Your reference to the work of Oosterbroek, P. (2024). Catalogue of the Crane Flies of the World, noting that the world fauna of Tipuloidea includes 15,726 species, is noted. This information will be shared with the botanical, freshwater, and faunal specialists contributing to the Environmental Impact Assessment (EIA) and formally recorded in the Comments and Responses Report. Where applicable, it will provide recommendations in the Environmental Management Programme (EMPr) regarding habitat preservation, particularly for sensitive insect groups. | EnviroAfrica |
| Thur 2024/09/26 | <p>NOTIFICATION OF INTENT TO DEVELOP: PROPOSED CONSTRUCTION OF HARMONY INSTREAM DAM ON FARM HOUDENBEK 415, EAST OF OP DIE BERG ON THE R304, CERES, PRINCE ALFRED HAMLET, SUBMITTED IN TERMS OF SECTION 38(1) OF THE NATIONAL HERITAGE RESOURCES ACT (ACT 25 OF 1999) The matter above has reference.</p> <p>Heritage Western Cape is in receipt of your application for the above matter received. This matter was discussed at the Heritage Officers Meeting held on 19 September 2024.</p> <p>You are hereby notified that, since there is</p> | HWC              | Noted.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | EnviroAfrica |

## COMMENTS AND RESPONSE REPORT – HARMONY INSTREAM DAM

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|  | <p>reason to believe that the proposed construction of harmony instream dam on Farm Houdenbek 415, East of Op Die Berg on The R304, Ceres, Prince Alfred Hamlet, will impact on heritage resources, HWC requires that a Heritage Impact Assessment (HIA) that satisfies the provisions of Section 38(3) of the NHRA be submitted. Section 38(3) of the NHRA provides 3).</p> <p>The responsible heritage resources authority must specify the information to be provided in a report required in terms of subsection (2)(a), Provided that the following must be included:</p> <p>(a) The identification and mapping of all heritage resources in the area affected.</p> <p>(b) An assessment of the significance of such resources in terms of the heritage assessment criteria set out in section 6(2) or prescribed under section 7.</p> <p>(c) An assessment of the impact of the development on such heritage resources.</p> <p>(d) An evaluation of the impact of the development on heritage resources relative to the sustainable social and economic benefits to be derived from the development;</p> <p>(e) The results of consultation with communities affected by the proposed development and other interested parties regarding the impact of the development on heritage resources;</p> <p>(f) If heritage resources will be adversely affected by the proposed development. The consideration of alternatives, and</p> <p>(g) plans for mitigation of any adverse effects during and after the completion of the proposed development</p> <p>(Our emphasis)</p> |  |  |  |
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## COMMENTS AND RESPONSE REPORT – HARMONY INSTREAM DAM

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|                                 | <p>This HIA must, in addition, have specific reference to the following:</p> <ul style="list-style-type: none"> <li>• Archaeological Impact Assessment</li> <li>• Palaeontological Impact Assessment</li> </ul> <p>The HIA must have an overall assessment of the impacts to heritage resources which are not limited to the specific studies referenced above. The required HIA must have an integrated set of recommendations.</p> <p>The comments of relevant registered conservation bodies, all Interested and Affected parties, and the relevant Municipality must be requested and included in the HIA, where provided.</p> <p>Proof of these requests must be supplied. If applicable, applicants are strongly advised to review and adhere to the time limits contained in the Standard Operational Procedure (SOP) between DEADP and HWC.</p> <p>The SOP can be found using the following link: <a href="http://www.hwc.org.za/node/293">http://www.hwc.org.za/node/293</a>. Kindly take note of the HWC meeting dates and associated agenda closure date in order to ensure that comments are provided within as Reasonable time and that these times are factored into the project timeframes.</p> <p>HWC reserves the right to request additional information as required.</p> |                  |                                                           |              |
| <b>Aquatic Species endemism</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                  |                                                           |              |
| Wed 2024/09/18                  | The genera Limonia (2 species), Platylimnobia (5 species), Trichotrimicra (3 species),                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Vladimir Lantsov | Your contribution has been formally recorded and will be: | EnviroAfrica |

## COMMENTS AND RESPONSE REPORT – HARMONY INSTREAM DAM

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|                | Dicranoptycha (2 species), Dolichopeza (17 species), Atarba (4 species), Idiognomomyia (3 species), Elephantomyia (9 species), Geranomyia (7 species), Neolimnomyia (2 species), Ellipteroides (6 species), Eugnomomyia (3 species), Geranomyia (7 species), Idiognomomyia (3 species), Limnophila (3 species), Platylimnobia (5 species), Limnophilomyia (3 species) are completely endemic. Almost all of these species are confined to aquatic or near-aquatic habitats. |                  | <ul style="list-style-type: none"> <li>Shared with the appointed faunal and freshwater specialists for further consideration.</li> <li>Included in the biodiversity and cumulative impact sections of the Environmental Impact Report (EIR).</li> <li>Used to inform the development of the Environmental Management Programme (EMPr), particularly with respect to wetland habitat conservation and microhabitat protection.</li> <li>This feedback has been shared with the botanical and freshwater teams. Where feasible, targeted invertebrate habitat verification will be considered in the final site sensitivity mapping</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                           |              |
| Wed 2024/09/18 | Monotypic endemic genus: The amazing endemic, narrow-range, monotypic genus Quathlambia - with the only species Quathlambia stuckenbergi Alexander, 1956, living in South Africa. The species is distinguished by reduced wings and halteres, and the legs are covered with scales.                                                                                                                                                                                         | Vladimir Lantsov | <p>We acknowledge the unique characteristics of this species, including its reduced wings and halteres, and scale-covered legs, which not only distinguish it taxonomically but also reflect its highly specialised ecological adaptations. Its limited distribution and distinctive morphology underscore its conservation significance, particularly in the context of environmental changes that may impact microhabitats and niche ecosystems. Your contribution has been formally recorded and will be:</p> <ul style="list-style-type: none"> <li>Shared with the appointed faunal and freshwater specialists for further consideration.</li> <li>Included in the biodiversity and cumulative impact sections of the Environmental Impact Report (EIR);</li> <li>Used to inform the development of the Environmental Management Programme (EMPr).</li> <li>This feedback has been shared with the botanical and freshwater teams. Where feasible, targeted invertebrate habitat verification will be considered in the final site sensitivity mapping</li> </ul> | EnviroAfrica |
| Wed 2024/09/18 | <b>Endemic hygrophilous species.</b> The endemic hygrophilous Tipula (Savtshenkia) draconis Alexander, 1964 is the only representative of this extensive subgenus in South Africa.                                                                                                                                                                                                                                                                                          | Vladimir Lantsov | <p>We acknowledge the particular ecological sensitivity and conservation importance of <i>T. draconis</i>. The presence or potential presence of species such as <i>T. draconis</i> will be considered in:</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | EnviroAfrica |

## COMMENTS AND RESPONSE REPORT – HARMONY INSTREAM DAM

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|                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                  | <ul style="list-style-type: none"> <li>• The refinement of biodiversity sensitivity maps.</li> <li>• The botanical and faunal verification surveys as part of the EIA process.</li> <li>• The development of site-specific mitigation and habitat protection measures within the Environmental Management Programme (EMPr).</li> <li>• This feedback has been shared with the botanical and freshwater teams. Where feasible, targeted invertebrate habitat verification will be considered in the final site sensitivity mapping</li> </ul>                                                                                                                                          |              |
| Wed 2024/09/18                    | <p><b>Unique Gondwana-origin fauna:</b> The entomofauna of South Africa is certainly one of the most unique on the African continent. The fauna includes numerous taxa, the phylogenetic relationships of which indicate their ancient origin. Their presence here is explained by the fact that they are the remains of groups that inhabited the ancient continent of Gondwana before its division into modern continents (Australia, Africa and South America).</p> | Vladimir Lantsov | <p>We acknowledge that the South African entomofauna includes numerous relictual and endemic taxa. Your comment has been formally recorded and will inform both:</p> <ul style="list-style-type: none"> <li>• The biodiversity and cumulative impact sections of the Environmental Impact Report (EIR); and</li> <li>• Recommendations for further specialist faunal input and site-specific conservation measures in the Environmental Management Programme (EMPr).</li> <li>• This feedback has been shared with the botanical and freshwater teams. Where feasible, targeted invertebrate habitat verification will be considered in the final site sensitivity mapping</li> </ul> | EnviroAfrica |
| <b>Habitat loss, biodiversity</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |              |
| Wed 2024/09/18                    | <p>As is known, the disappearance of species is often associated with the loss of their habitats, given that a significant part of the entomofauna and, in particular, tipuloid dipterans, are topically confined to aquatic and near-water communities, their loss in the Kleine Cederberg nature reserve will inevitably lead to the disappearance of unique biota. Please consider my opinion when making a decision.</p>                                           | Vladimir Lantsov | <p>We fully acknowledge your concern that any hydrological disruption or habitat alteration, including that potentially caused by dam construction, may contribute to the local extinction of specialised and endemic species within the Kleine Cederberg Nature Reserve and its surrounding ecological corridors. Your opinion and ecological warning have been formally recorded as part of the public participation process and will be:</p>                                                                                                                                                                                                                                       | EnviroAfrica |

## COMMENTS AND RESPONSE REPORT – HARMONY INSTREAM DAM

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|                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                   | <ul style="list-style-type: none"> <li>• Considered in the evaluation of biodiversity and ecosystem-level impacts in the Environmental Impact Report (EIR).</li> <li>• Shared with specialist ecologists and conservation authorities involved in the review of the proposed development.</li> <li>• Reflected in any mitigation or offset recommendations that may arise during the EIA process.</li> <li>• This feedback has been shared with the botanical and freshwater teams. Where feasible, targeted invertebrate habitat verification will be considered in the final site sensitivity mapping</li> </ul> |              |
| Sat 2024/09/07 | <p>I can report that there are a large number of near-water insects from various orders and families. There are many species of dragonflies of the families: <i>Sylestidae</i>, <i>Coenagrionidae</i> (Masai Sprite, Hagen's Sprite), Anisoptera (Common Thorntail), <i>Aeshnidae</i> (Blue Emperor and Friendly Hawker), Libellulidae (about 10 species). Of the praying mantises found here are Flower Mantid, Boxer Mantid, Common Green Mantid, Delicate Mantid, Marbled Mantid, Ground Mantid, Stick Mantid and <i>Coneheaded</i> Mantid. There are a large number of species of Grasshoppers and <i>Locuts</i> (Orthoptera), such as Foam Grasshopper, Elegant Grasshopper, Common Stick Grasshopper, Green Tree Locust, Brown Locust, Garden Locust and Blue-wing. Quite numerous Water Bugs: Pygmy water boatmen, Common Beckswimmer, Stout Beckswimmer, Flat Saucer Bugs, Water Stick Insects and Common Water Scorpion.</p> | Valentin Tikhonov | <p>Your contribution will be:</p> <ul style="list-style-type: none"> <li>• Shared with the faunal and freshwater specialists for potential field verification.</li> <li>• Included in the Comments and Responses Report.</li> <li>• Used to inform biodiversity sensitivity mapping and appropriate mitigation or conservation measures in the Environmental Management Programme (EMPr).</li> <li>• This feedback has been shared with the botanical and freshwater teams. Where feasible, targeted invertebrate habitat verification will be considered in the final site sensitivity mapping</li> </ul>         | EnviroAfrica |
| Sat 2024/09/07 | <p>This area is home to unique Karoo endemics from the order <i>Mantophasmatodea</i>: Jade Heel-walker (<i>Viridiphasma clarnwilliamense</i>), Namaqualand Heel-walker (<i>Karoophasma</i></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Valentin Tikhonov | <p>This information has been:</p> <ul style="list-style-type: none"> <li>• Formally recorded in the Comments and Responses Report.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | EnviroAfrica |

## COMMENTS AND RESPONSE REPORT – HARMONY INSTREAM DAM

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|                                                       | <i>biedouwense</i> ) and Fynbos Heel-walker ( <i>Lobatophasma redelinghuysense</i> ).                                                                                                                                                                                                        |                   | <ul style="list-style-type: none"> <li>Shared with the faunal specialist team to evaluate the likelihood of suitable habitat within or adjacent to the development footprint.</li> <li>Flagged for inclusion in the biodiversity sensitivity analysis and mitigation planning within the Environmental Impact Report (EIR) and Environmental Management Programme (EMPr).</li> <li>This feedback has been shared with the botanical and freshwater teams. Where feasible, targeted invertebrate habitat verification will be considered in the final site sensitivity mapping</li> </ul>           |              |
| <b>Entomology study</b>                               |                                                                                                                                                                                                                                                                                              |                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |              |
| Sat 2024/09/07                                        | In August 2017 and October 2018, I visited the private nature reserve Kleine Cederberg in South Africa with professor of botany Alexander Ivanov. My profession is entomology and I studied the insects of this park, including those in the floodplain of the Haudenbek River.              | Valentin Tikhonov | <p>While the proposed Harmony Dam is not located within the Kleine Cederberg reserve, the comment highlights the ecological connectivity between upstream tributaries such as the Houdenbek and downstream conservation areas. The floodplain habitats you reference are particularly important for supporting specialised and often overlooked invertebrate communities.</p> <p>Although specific invertebrate surveys were not part of the initial scope of the environmental assessment, your input will be shared with the ecological and botanical specialists for further consideration.</p> | EnviroAfrica |
| <b>Environmental expert, conservationist, author.</b> |                                                                                                                                                                                                                                                                                              |                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |              |
| Sat 2024/09/07                                        | I am a specialist in the field of environmental protection in the North Caucasus region; I am an expert in environmental protection in the North Caucasus region, the author of essays on butterflies in the Red Book of Stavropol region and the author of the website babochki-kavkaza.ru. | Valentin Tikhonov | While your work focuses on a different geographic region, your expertise in invertebrate conservation and sensitive species identification is relevant and appreciated in the context of this project. The proposed Harmony Dam site lies in an area with high ecological value and local endemism, including vulnerable vegetation types and riparian systems that may support diverse invertebrate populations.                                                                                                                                                                                  | EnviroAfrica |
| Sat 2024/09/07                                        | I have been studying the consequences of human exposure to the environment and the conservation of biodiversity, and I express my                                                                                                                                                            | Valentin Tikhonov | Your objection to the construction of the dam has been formally recorded and will be included in the Comments and Response Report submitted to the competent                                                                                                                                                                                                                                                                                                                                                                                                                                       | EnviroAfrica |

## COMMENTS AND RESPONSE REPORT – HARMONY INSTREAM DAM

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|            | negative attitude to the construction of Houdenbek Onder Dam at the Howdenbeck Farm No. 415 Ceres. Please take my opinion into account when making a decision.                                                                                                                               |            | authority as part of the Environmental Impact Assessment (EIA) process. All registered objections and inputs from Interested and Affected Parties (I&APs) form an important part of the decision-making process, and your view will be considered alongside the findings of the specialist studies and regulatory requirements.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |              |
| 2017/07/21 | CapeNature would like to thank you for the opportunity to comment on this application.                                                                                                                                                                                                       | CapeNature | Noted.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | EnviroAfrica |
| 2017/07/21 | Please note that CapeNature does not support new instream dams or enlargement of existing instream dams unless it can be shown that the ecological condition of the river/stream in which the dam is located can be improved and no significant terrestrial or aquatic habitat will be lost. | CapeNature | <p>The policy position has been considered throughout the Environmental Impact Assessment (EIA) process for the proposed Harmony Dam. The freshwater and botanical specialist assessments have identified both ecological sensitivities and areas of historical disturbance within the proposed dam footprint. In response, the project has been revised to:</p> <ul style="list-style-type: none"> <li>• Select the least ecologically disruptive layout Option 3 avoids Kouebokkeveld Alluvium Fynbos, sensitive riparian zones, and heritage sites (HMY1–2). avoiding more intact fynbos and heritage resources.</li> <li>• Implement ecological flow releases and real-time flow monitoring to maintain downstream habitat integrity.</li> <li>• Restrict abstraction to surplus high-flow events only, as per the conditions of the approved Water Use Licence (WUL).</li> <li>• Avoid the Critically Endangered Kouebokkeveld Alluvium Fynbos, which is present in the agricultural expansion area but not within the dam footprint.</li> </ul> | EnviroAfrica |
| 2017/07/21 | Harmony Dam is not supported by CapeNature as it is located within a proclaimed Mountain Catchment Area (Kouebokkeveld MCA). No activities which result in loss of habitat or alteration of water flow or quality should be permitted in MCAs. MCAs are of very high                         | CapeNature | CapeNature's policy that no activities resulting in habitat loss or alteration of water flow or quality should be permitted within MCAs is noted and taken seriously. The environmental assessment process has recognised the ecological and hydrological importance of this area and                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | EnviroAfrica |

## COMMENTS AND RESPONSE REPORT – HARMONY INSTREAM DAM

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|            | conservation value and should be treated and managed as formal protected areas. Runoff from this MCA assists in maintaining the water quality of the Houdenbeks River and groundwater recharge. It should be noted that a significant amount of water is already being captured by the dams in the Houdenbeks River and the many smaller dams in the Quaternary Catchment Area.                                                                                                                                        |            | has evaluated the proposed development in that context.<br>Key considerations and mitigation measures include: <ul style="list-style-type: none"> <li>• Selection of a dam layout Option 3 avoids Kouebokkeveld Alluvium Fynbos, sensitive riparian zones, and heritage sites (HMY1–2) that avoid the most sensitive areas and utilises a previously disturbed footprint to minimise habitat loss.</li> <li>• The implementation of ecological flow releases to maintain downstream water quality and ecosystem services.</li> <li>• Abstraction limited to surplus high-flow periods only, with real-time flow monitoring to ensure protection of baseflows and recharge processes.</li> <li>• Compliance with the conditions of the approved Water Use Licence (WUL), which incorporates hydrological and ecological safeguards.</li> <li>• Recognition that no critically endangered vegetation types will be lost at the dam site itself (though present in the proposed cultivation area).</li> </ul> |              |
| 2017/07/21 | Toeka Dam is not within the MCA, however, it is proposed within an area determined as Ecological Support Area (ESA). Although it is acknowledged by the 2017 Biodiversity Spatial Plan that some of the ESA is degraded, the ESAs on this site have been determined as such because they are important for groundwater recharge, watercourse protection and the presence of a channelled valley bottom wetland. Ideally this area should be rehabilitated to allow for improved water flow and ecological functioning. | CapeNature | Noted.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | EnviroAfrica |
| 2017/07/21 | Should the applicant wish to pursue the applications for these dams, a freshwater specialist must be appointed to consider direct and cumulative impacts and to determine                                                                                                                                                                                                                                                                                                                                              | CapeNature | Your recommendation that a freshwater specialist be appointed to assess direct and cumulative impacts, determine the Ecological Flow Reserve, and evaluate river rehabilitation requirements is noted and has                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | EnviroAfrica |

## COMMENTS AND RESPONSE REPORT – HARMONY INSTREAM DAM

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|  | <p>Ecological Flow Reserve and river rehabilitation requirements. However, our objection to Harmony Dam is likely to remain in place as development of a dam in the proposed location is contrary to the conservation objectives of a MCA.</p> |  | <p>already been addressed as part of the current Environmental Impact Assessment (EIA) process. A freshwater specialist study has been completed and includes:</p> <ul style="list-style-type: none"> <li>• An assessment of the ecological sensitivity of the Houdenbeks River and tributaries.</li> <li>• Analysis of the cumulative effects of the Harmony Dam.</li> <li>• Recommendations for ecological flow releases and real-time flow monitoring to safeguard downstream users and aquatic ecosystems.</li> <li>• Consideration of the broader hydrological context within the Olifants-Doorn Water Management Area.</li> </ul> |  |
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## COMMENTS AND RESPONSE REPORT – HARMONY INSTREAM DAM

| Pre-Consultation – 26 May 2025 until 30 June 2025 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |              |
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| Date                                              | Comment                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | I&AP       | Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Respondent   |
| 03 July 2025                                      | <p>RE: The Proposed Development of the Harmony Instream Dam, Pipeline and associated Agricultural area on the Remainder of Farm Houdenbek No. 415 (Morester Landgoed), Ceres, Western Cape – Pre-Application Scoping Report. DEA&amp;DP reference: 16/3/3/6/7/2/B5/2/1476/23</p> <p>CapeNature would like to thank you for the opportunity to comment on the Pre-Application Scoping Report. Please note that our comments pertain primarily to impacts on biodiversity and not to the overall desirability of the project.</p> <p><u>General:</u></p> <ol style="list-style-type: none"> <li>1. There was a previous application for the construction of both Harmony and Toeka Dams on the Remainder of Farm Houdenbek No 415, Ceres, (DEA&amp;DP reference number: 16/3/3/6/7/1/B5/2/1367/17), which CapeNature commented on 21 July 2017, 31 October 2018 and 22 August 2019, respectively. These comments still have reference.</li> <li>2. According to the National Vegetation Map of South Africa (2018), there are two vegetation types mapped within the footprints of the proposed dam and agricultural area: Winterhoek Sandstone Fynbos, which is currently not listed as a threatened ecosystem, and Kouebokkeveld Alluvium Fynbos, listed as a Critically Endangered ecosystem which is the dominant vegetation type</li> </ol> | CapeNature | <p>Thank you for CapeNature's comments. The project team acknowledges the biodiversity sensitivity of the receiving environment and confirms that the preferred dam layout (Option 3) was selected specifically because it achieves the required storage objective while reducing direct ecological impact relative to the other dam layout options identified during specialist input and layout screening.</p> <ol style="list-style-type: none"> <li>1. Previous application (2017–2019): The historic submissions (21 July 2017, 31 October 2018, and 22 August 2019) are acknowledged as relevant. They have been reviewed and have informed the current issue register, the refinement of the preferred layout, and the focus areas for specialist investigation and mitigation planning.</li> <li>2. Vegetation types (2018 National Vegetation Map): The mapped occurrence of Winterhoek Sandstone Fynbos (dam footprint) and Critically Endangered Kouebokkeveld Alluvium Fynbos (agricultural footprint) is acknowledged. The preferred layout has been refined to avoid/limit disturbance outside the mapped development footprints and to incorporate no-go and buffer areas where applicable. The botanical findings already indicate that the agricultural</li> </ol> | EnviroAfrica |

## COMMENTS AND RESPONSE REPORT – HARMONY INSTREAM DAM

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|  | <p>in the proposed agricultural area. Although small patches have been previously disturbed, larger areas of intact natural (undisturbed) vegetation remains.</p> <p><u>The proposed Harmony Dam:</u></p> <p>3. The 2017 Western Cape Biodiversity Spatial Plan (BSP) indicates that the proposed dam area is partially situated within a Terrestrial Critical Biodiversity Area (CBA), as well as within Ecological Support Areas (ESA: Aquatic &amp; ESA2: Restore). ESAs play an important role in supporting the functioning of Protected Areas (PA) or CBAs and are often vital for delivering ecosystem services. The ESA is mapped due to the presence of a watercourse, for water source protection, upland lowland interface and for groundwater recharge and it is essential that these areas are managed or restored to minimize the impact on ecological processes and ecological infrastructure functioning, especially soil and water-related services. Furthermore, the majority of the proposed dam area is situated within the Kouebokkeveld Mountain Catchment Area (MCA). MCAs refers to a defined region in a mountain range that collects and channels rainwater, snowmelt, and other precipitation into rivers and streams, ultimately contributing to a larger water system. These areas are crucial for water supply and play a vital role in ecological processes and biodiversity, especially in mountain regions. MCAs are important and significant in terms of Water Sources (MCAs are significant sources of freshwater for urban areas, agriculture, and industry in the Western Cape), Protection (MCAs</p> |  | <p>component represents the key biodiversity constraint and will be treated as such in the application motivation and impact management approach.</p> <p>3. BSP sensitivity (CBA/ESA/MCA/SWSA): The BSP mapping (CBA and ESA: Aquatic / ESA2: Restore) and location within the proclaimed Kouebokkeveld Mountain Catchment Area are acknowledged. The preferred layout and management approach will include: maintaining watercourse and riparian buffers where applicable; restricting construction access and activities to demarcated footprints; erosion and sediment control; and a construction and operational management framework that explicitly recognises the ecological infrastructure functions (soil and water-related services; recharge and runoff processes).</p> |  |
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## COMMENTS AND RESPONSE REPORT – HARMONY INSTREAM DAM

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|  | <p>are protected to ensure supply of good quality and quantity of water, as well as to protect biodiversity that relies on higher lying area for refugia) and MCAs are therefore of high ecological importance. The MCA and larger area are considered an important area for runoff and acts as a Primary catchment area and Strategic Water Source Area (SWSA) for Ground (Northwestern Cape Ranges) and Surface water (Groot Winterhoek).</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  |
|  | <p>4. CapeNature does not support activities within MCAs which compromise the movement of surface water and/or recharge of groundwater. Instream dams are not supported within MCAs. CapeNature objects to the proposed Harmony Dam as it located within a proclaimed Mountain Catchment Area (Kouebokkeveld MCA), which is a formal Protected Area in terms of the National Environmental Management: Protected Areas Act, 2003 (Act No. 57 of 2003) (NEM:PAA). No activities which result in loss of habitat or alteration of water flow or quality should be permitted in MCAs. MCAs are of very high conservation value and should be treated and managed as formal protected areas. Runoff from this MCA assists in maintaining the water quality and quantity of the Houdenbeks River and groundwater recharge. It should be noted that a significant amount of water is already being captured by the dams in the Houdenbeks River and the many smaller dams in the Quaternary Catchment Area. It was also noted that a significant number of I&amp;APs (including a Private Nature Reserve, private users and commercial users) raised concerns about impacts on downstream water supply upon which they are dependant, and these issues have recently been reiterated.</p> |  | <p>4. CapeNature objection to instream dams in MCAs / protected area context: CapeNature's policy position and objection are acknowledged. The current application basis is that the dam will operate under the existing water use authorisation framework, with abstraction limited to surplus winter runoff and with operational rules intended to protect downstream ecological function and lawful water users. The preferred layout is supported by an approach that includes controlled outlet / release infrastructure, monitoring and compliance measures, and avoidance of sensitive heritage features through incorporated buffers. The desirability and acceptability considerations raised by CapeNature are recognised as material to decision-making and are addressed through the selected preferred layout and the proposed operational and environmental controls underpinning the application motivation.</p> |  |

## COMMENTS AND RESPONSE REPORT – HARMONY INSTREAM DAM

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|  | <p>5. The Botanical Assessment indicates that the results of the Screening Tool for the Terrestrial Biodiversity Theme are of Very High Sensitivity and Medium Sensitivity for the Plant Species Theme – however, the field surveys indicates that the Plant Species sensitivity should be High. No Species of Conservation Concern (SCC) were encountered at the proposed Harmony Dam site, however there is a possibility that the recently described ‘new’ Endangered <i>Aspalathus jardini</i> could occur within the agricultural area. The Impact Assessment also indicates that the direct impacts of the proposed Harmony Dam and agricultural area have High Negative impacts (for Options 1, 2 and 4) and Medium Negative impacts for Dam Option 3. The High Negative impacts are due to the loss of vegetation and habitat (including plant species and ecological processes) of undisturbed natural vegetation.</p> <p>6. The Freshwater report of May 2018 details the regional context of the quaternary catchment and stresses that that “the combined storage capacity of farm dams in the upper Doring River catchment is probably more than the Mean Annual Runoff (MAR). This has dire consequences for river health, especially further down the river catchment, particularly the Doring River, yet additional dams such as the envisaged Harmony and Toeka Dams would serve to worsen the situation.” CapeNature ecologists support these findings and report that the Houdenberg is a highly stressed catchment, citing the combined effect of the large number of existing dams as negatively impacting flow. This aligns with the evidence presented in the 2018</p> |  | <p>5. Plant Species sensitivity / SCC potential: The elevation of Plant Species sensitivity based on field evidence is acknowledged. While no SCCs were recorded at the dam footprint, the potential for SCCs (including <i>Aspalathus jardini</i>) within the agricultural footprint is noted and is treated as a key risk driver informing: (i) the refined footprint; (ii) strict construction demarcation; and (iii) the specialist-led mitigation/management measures and recommendations.</p> <p>6. Freshwater stress, cumulative impacts and hydrology: The catchment stress concerns and the May 2018 freshwater findings are acknowledged. The application basis remains that the dam is intended to store surplus winter flows and to be operated in compliance with licence conditions aimed at protecting downstream flows. The preferred layout is linked to a management approach that includes downstream flow protection, erosion and sediment controls, and the integration of cumulative context as a core assessment consideration (including the presence of existing dams and abstractions).</p> |  |
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## COMMENTS AND RESPONSE REPORT – HARMONY INSTREAM DAM

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|  | <p>Freshwater report, which indicates that the proposed development would severely compromise the functioning of the already stressed downstream river system. Consistent with our previous comments, freshwater impacts and downstream cumulative impacts on water quality and quantity remain a concern, especially given that a hydrological study has not been done for the catchment and the availability of water has not been confirmed by the Department of Water and Sanitation (DWS).</p> <p><u>Proposed Agricultural Area:</u></p> <p>7. The proposed Harmony agricultural area is situated within a Terrestrial CBA. CBAs include areas that are in a natural condition that are required to meet biodiversity targets for species, ecosystems or ecological processes and ecological infrastructure. The CBA is mapped due to the presence of the threatened vegetation type, Northwest Alluvium Fynbos Flat and Floodplain Wetland, Freshwater Ecosystem Priority Area (FEPA) River Corridor, as well as for Watercourse protection (Western Folded Mountains) and it is essential that these areas are maintained in a natural or near-natural state, with no further loss of habitat and degraded areas should ideally be rehabilitated. Only low-impact, biodiversity sensitive land uses are appropriate.</p> |  | <p>7. Agricultural footprint in a Terrestrial CBA: The CBA mapping and associated ecological infrastructure role is acknowledged. The preferred layout has been refined relative to earlier iterations to reduce avoidable ecological disturbance, while maintaining the agricultural objective. Any residual impacts are treated as a key constraint requiring specialist input, mitigation and regulatory consideration.</p> |  |
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## COMMENTS AND RESPONSE REPORT – HARMONY INSTREAM DAM

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|              | 8. The Harmony Agricultural Area consists of vegetation in a good condition and would result in the complete loss of a tract of Critically Endangered Kouebokkeveld Alluvium Fynbos. The impact of the clearing of this 29 ha area for crop production would be Very High Negative.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |         | 8. Transformation of Critically Endangered vegetation / offsets:<br>The seriousness of the potential loss of Kouebokkeveld Alluvium Fynbos is acknowledged. The application motivation recognises that this component represents the principal biodiversity trade-off and that avoidance and minimisation have driven layout refinement. Where residual impacts remain, the approach to mitigation and any offset                                                                              |              |
| 30 June 2025 | <p>COMMENT ON THE DRAFT SCOPIGN REPORT ("SR") IN TERMS OF THE NATIONAL ENVIRONMENTAL MANAGEMENT ACT (ACT NO. 107 OF 1998) ("NEMA") ENVIRONMENTAL IMPACT ASSESSMENT REGULATIONS, 2014 (AS AMENDED) ("EIA") FOR THE PROPOSED CONSTRUCTION OF THE HARMONY INSTREAM DAM AND ASSOCIATED AGRICULTURAL AREA ON THE REMAINDER OF FARMS HOUDENBEK NO. 415 AND WINKELHAAK NO. 224, CERES</p> <p>1. The draft SR dated May 2025, as received by the Directorate: Development Management Region 1 (hereinafter referred to as "this Directorate") on 23 May 2025, refers.</p> <p>2. Following the review of the information submitted to this Department, the following is noted:</p> <p>2.1 The proposal entails</p> <p>2.2 Construction of an instream dam in an unnamed tributary of the Houdenbek River on the Remainder of Farm Houdenbek No. 415. The dam specifications are:</p> <ul style="list-style-type: none"> <li>▪ Dam wall length: 280m</li> <li>▪ Dam wall height: 12,8m</li> <li>▪ Dam capacity: 250 000m³</li> <li>▪ Dam surface area: 5,4ha</li> </ul> <p>2.3 The establishment of a 30ha agricultural area</p> | WCDEADP | <p>Noted.</p> <p>The Directorate's summary of the proposal is confirmed in respect of the current preferred layout, namely:</p> <ul style="list-style-type: none"> <li>• Dam wall length: ±280 m</li> <li>• Dam wall height: ±12.8 m</li> <li>• Storage capacity: ±250 000 m³</li> <li>• Inundation area: ±5.4 ha</li> <li>• Establishment of ±25 ha agricultural area</li> <li>• Associated irrigation infrastructure</li> </ul> <p>The agricultural component comprises approximately 25</p> | EnviroAfrica |

## COMMENTS AND RESPONSE REPORT – HARMONY INSTREAM DAM

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|  | <p>2.4 The construction of irrigation infrastructure.</p> <p>3.The Department has the following comments that must be addressed and included in the in-process SR:</p> <p>3.1 It is noted that a round of public participation was undertaken during August 2024. However, there is no record that this Directorate was notified or given the opportunity to provide comment.</p> <p>3.2 Directorate did, however, provided comment during an earlier round of public participation in August 2019. It is unclear whether the comments issued by this Directorate in August 2019 were addressed, as the previous rounds</p> | <p>hectares of new orchard development (pome fruit and kiwis). The majority of this footprint overlaps with indigenous vegetation mapped as Critically Endangered Kouebokkeveld Alluvium Fynbos, representing the primary biodiversity constraint of the project. The botanical assessment (McDonald, 2025) rates the transformation of this vegetation as Very High Negative and irreversible, forming the key environmental trade-off requiring authority consideration.</p> <p>We confirm that the proposal includes the installation of irrigation pipelines and infrastructure to convey water from the dam to the agricultural area.</p> <p>We acknowledge that a round of public participation was conducted during August 2024 as part of the pre-application scoping phase. We regret that the Department of Environmental Affairs and Development Planning (DEA&amp;DP) was not formally notified during this round and therefore was not provided the opportunity to submit comments at that time. This omission is noted and will be rectified going forward. The Directorate will be formally notified and included in all subsequent phases of the public participation process, including the release of the Draft Scoping Report (if applicable) and Draft Basic Assessment Report (DBAR), as required under the EIA Regulations, 2014 (as amended).</p> <p>We acknowledge that the Directorate provided comment during the earlier public participation process in August 2019, and we appreciate your engagement in the review of the project. We also acknowledge the concern that the 2019 comments do not appear to have been included or addressed in the pre-</p> |  |
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## COMMENTS AND RESPONSE REPORT – HARMONY INSTREAM DAM

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|  | <p>of public comments have not been included in the draft SR.</p> <p>3.3 It is noted that, in addition to the area to be cleared for dam construction, the proposed agricultural activities will involve the clearance of approximately 29 hectares of vegetation. You are hereby required to confirm the applicability of Activity 15 of Listing Notice 2 of the EIA Regulations, 2014 (as amended).</p> <p>3.4 If biodiversity offsets are being considered by the applicant as part of the application, due to</p> |  | <p>consultation draft Scoping Report (SR). This was an oversight, and we confirm that the 2019 comments will be compiled, referenced, and formally responded to in the updated Comments and Response Report to be included in the Draft Scoping Report.</p> <p>We confirm that the proposed agricultural component of the project involves the clearance of approximately 25 hectares of indigenous vegetation, which forms part of the total development footprint associated with the Harmony Dam and agricultural expansion.</p> <p>Based on the size of the area to be cleared and the sensitivity of the receiving environment, we acknowledge that this trigger Activity 15 of Listing Notice 2 of the EIA Regulations, 2014 (as amended), which states:</p> <p><i>“The clearance of an area of 20 hectares or more of indigenous vegetation, excluding where such clearance of indigenous vegetation is required for—</i></p> <p><i>(i) the undertaking of a linear activity; or</i></p> <p><i>(ii) maintenance purposes undertaken in accordance with a maintenance management plan.”</i></p> <p>As the proposed clearance exceeds the 20-hectare threshold and is not associated with a linear activity or maintenance, we confirm that Activity 15 of Listing Notice 2 is applicable to this application.</p> <p>This listed activity will be included in the updated list of triggered activities in the formal application, and the necessary assessment of alternatives, cumulative impacts, and mitigation measures will be undertaken as required by the EIA Regulations.</p> <p>We acknowledge that the proposed clearance of Critically Endangered Kouebokkeveld Alluvium Fynbos would result in</p> |  |
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## COMMENTS AND RESPONSE REPORT – HARMONY INSTREAM DAM

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|  | <p>the irreversible impact on sensitive vegetation, then the identification of a site suitable for this purpose must be identified as early as possible in the process, to avoid any delays during the formal application.</p> <p>4 <u>Regulatory requirements:</u></p> <p>4.1 Proof of the notifications and the copies of the notification letters sent to registered I&amp;APs for the comment on the draft SR must be included in the final SR.</p> |  | <p>an irreversible loss of sensitive vegetation, and that the impact is rated as Very High Negative by the botanical specialist. As such, the use of a biodiversity offset is being actively considered by the applicant as a potential mitigation measure.</p> <p>In line with your guidance, we confirm that the project team is currently in the process of identifying a suitable offset site to address this residual impact. Preliminary discussions have explored the potential for a ±500 ha offset area (based on a 1:20 offset ratio), which would be formally protected and managed under a biodiversity stewardship framework.</p> <p>We fully agree that early identification and assessment of the offset site is critical to avoid delays during the formal application process, and we are prioritising this work accordingly. Once a suitable site is confirmed, it will be assessed by relevant specialists and presented with supporting mapping, landowner agreements (where applicable), and a proposed offset management plan for authority review and comment as part of the Draft Scoping Report.</p> <p>We confirm that proof of notifications and copies of the notification letters sent to registered Interested and Affected Parties (I&amp;APs) for the review of the Pre-consultation Scoping Report will be included in the Draft Scoping Report (SR). This will include:</p> <ul style="list-style-type: none"> <li>• A copy of the notification letter/email distributed to all registered I&amp;APs,</li> <li>• A list of all recipients,</li> <li>• Proof of delivery (e.g. email logs or registered mail receipts), and</li> <li>• The dates of notification in accordance with the EIA Regulations, 2014 (as amended).</li> </ul> <p>These documents will be compiled in an appendix to the Draft SR as part of the Public Participation Process record.</p> |  |
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## COMMENTS AND RESPONSE REPORT – HARMONY INSTREAM DAM

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|  | <p>4.2 All representations and comments received during the commenting period for the must be in process final SR and any responses by the EAP to those representations and comments must be tabulated in a comments and response report.</p> <p>4.3 The minutes of any meetings held by the EAP with I&amp;APs and other role players which record the views of the participants.</p> <p>4.4 Please be advised that a digitally signed and dated applicant declaration is required to be submitted with the final SR to this Department for decision-making. It is important to note that by signing this declaration, the applicant is confirming that they are aware and have taken cognisance of the contents of the report. Furthermore, through signing this declaration, the applicant is making a commitment that they are both willing and able to implement the necessary mitigation, management and monitoring measures recommended within the report with respect to this application.</p> <p>4.5 In addition to the above, please ensure that an updated, digitally signed and dated EAP and specialist declarations are also submitted with the final SR for decision-making.</p> |  | <p>We confirm that all representations and comments received from Interested and Affected Parties (I&amp;APs), organs of state, and commenting authorities during the public commenting period for the Pre-consultation Scoping Report (SR) will be included in the Final Scoping Report.</p> <p>In accordance with the EIA Regulations, 2014 (as amended), the EAP's responses to each comment will be tabulated in a Comments and Response Report, which will form part of the appendices to the Final SR.</p> <p>We confirm that, should any meetings be held between the Environmental Assessment Practitioner (EAP), Interested and Affected Parties (I&amp;APs), or other relevant role players, the minutes of such meetings, including the views and inputs of participants, will be compiled and included in the Draft Scoping Report.</p> <p>We acknowledge that a digitally signed and dated applicant declaration is required for submission with the Draft and Final Scoping Report (SR).</p> <p>We confirm that the applicant will be requested to complete and sign the declaration for submission.</p> <p>We confirm that updated, digitally signed, and dated declarations from both the Environmental Assessment Practitioner (EAP) and all appointed specialists will be included in the Draft and Final Scoping Report (SR) submission.</p> |  |
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## COMMENTS AND RESPONSE REPORT – HARMONY INSTREAM DAM

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|  | <p>5 You are reminded that the SR must contain all the information outlined in Appendix 2 of Environmental Impact Assessment (“EIA”) Regulations 2014 (as amended).</p> <p>6 Kindly quote the abovementioned reference number in any future correspondence concerning the proposed development.</p> <p>7 Please note that the activity may not commence prior to an environmental authorisation being granted by the Department.</p> <p>8 This Department reserves the right to revise or withdraw its comments and request further information based on any information received.</p> |  | <p>We acknowledge the requirement that the Scoping Report (SR) must comply with the provisions of Appendix 2 of the Environmental Impact Assessment (EIA) Regulations, 2014 (as amended). We confirm that the draft and final Scoping Report will include all prescribed information.</p> <p>Noted.</p> <p>Noted.</p> <p>Noted.</p> |  |
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## COMMENTS AND RESPONSE REPORT – HARMONY INSTREAM DAM

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| 21 May 2025 | <p>Application Proposed Dam:<br/>Harmony Dam – on remainder of the farm Houdenbek NO. 415 Morester Landgoed, Ceres.<br/>Objection: De Naauwte Erf 136 District of Ceres Karoo</p> <p>We, Justus W R Bruwer &amp; Marguerite A Bruwer of the farm De Naauwte, hereby wish to register our objection to the above-mentioned application. Reasons for our objection:</p> <p>1) The farm De Naauwte is only but one of several farms severely impacted by the flow of water in the Rietrivier. The section of river that runs through our farm had been bone dry in the past lasting 3 years. Due to above average rainfall during 2023 and 2024 the river has flowed again but ran dry by the middle of summer of 2023 where it flows through the farm. The Rietriver is our only source of water. The river water has been used mainly for domestic purposes up to this point in time.</p> <p>2) - The Houdenbeks river feeds into the Rietrivier. - there is extensive agriculture in this catchment area thus the groundwater use exceeds recharge and levels have dropped alarmingly. Groundwater contributes significantly to river base flow.</p> | Marguerite & Justus Bruwer (De Naauwte Farm) | <p>Your objection is acknowledged and formally recorded. The concerns raised regarding downstream water availability in the Riet River, cumulative catchment development, groundwater recharge, and ecological flow reduction are noted and will be addressed in the Environmental Impact Assessment (EIA).</p> <p>1. Downstream Flow and River Drying</p> <p>The observation that the Riet River section on your property has dried during recent summers, despite above-average rainfall, is acknowledged. The WATSAN Africa (2024) Freshwater Report confirms that the Houdenbek–Riet River system is hydrologically stressed and highlights the importance of strict ecological flow management in preventing further seasonal desiccation. The potential cumulative effect of additional storage infrastructure will be evaluated within the hydrological and freshwater specialist assessments forming part of the EIA.</p> <p>2. Groundwater and Baseflow Contribution</p> <p>It is recognised that groundwater contributes significantly to baseflow in the Houdenbek–Riet system. The interaction between surface water impoundment, groundwater recharge, and dry season flow persistence will be addressed in the hydrological assessment. The EIA will consider cumulative groundwater abstraction and recharge dynamics in assessing downstream impacts.</p> | EnviroAfrica |
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## COMMENTS AND RESPONSE REPORT – HARMONY INSTREAM DAM

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|  | <p>3) Please take note that in April of 2012, the Final Project Report done by the Department of Water Affairs, Chief Directorate: Resource Directed Measure, and we quote a few points mentioned in the Report.</p> <p>Koue Bokkeveldd IUA, which has 2% of the population, accounts for 18% of the water usage in the WMA.</p> <p>“No large dams or large water wier development on the mainstream of the Doring, Groot, Riet, Verlorenvlei, Langvlei, Jakkels and Papkuils rivers”</p> <p>No new licenses for water abstraction in summer (low flow) period of the year in the mainstream of the Olifants upstream of the Clanwilliam Dam, Doring, Groot, Riet, Verlorenvlei, Langvlei, Jakkels and Papkuils rivers.”</p> <p>“ The Houdenbeks is fully developed”</p> <p>4) Approximately 95% of water use in the WMA is used in the agricultural sector. The above mentioned study/report found that future growth in demand for water is therefore likely to be linked to increased demand from the agriculture sector and not due to increased demand linked to population growth.</p> <p>5) Groundwater defects after taking surface water EWR low flow into account. The Kouebokke veldt ground water exceeds recharge and water levels are</p> |  | <p>3. 2012 Department of Water Affairs Report</p> <p>The 2012 policy directives and findings referenced in your submission are acknowledged. While the proposed Harmony Dam is located on an unnamed tributary of the Houdenbek River and not on the mainstream system, cumulative downstream implications remain a valid concern and will be assessed accordingly.</p> <p>The project is regulated under a valid Water Use Licence (WUL) issued by the Department of Water and Sanitation (DWS) in terms of Sections 21(a), (b), (c) and (i) of the National Water Act. The WUL includes conditions governing abstraction timing, abstraction volumes, and downstream ecological flow protection. Abstraction is restricted to surplus winter flows and is prohibited during low-flow periods, in alignment with ecological reserve requirements.</p> <p>4. Agricultural Water Use Context</p> <p>The statistic that approximately 95% of water use within the Water Management Area is attributed to agriculture is acknowledged. The proposed dam does not increase authorised annual abstraction beyond licensed limits but seeks to store surplus winter runoff within regulated parameters. Compliance with WUL conditions forms a binding regulatory requirement.</p> <p>5. Groundwater Recharge Concerns</p> <p>The concern that runoff-based storage may alter natural recharge patterns is acknowledged. The hydrological assessment will evaluate potential effects on groundwater-</p> |  |
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## COMMENTS AND RESPONSE REPORT – HARMONY INSTREAM DAM

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|  | <p>dropping. Groundwater is shallow. Groundwater supply is at risk.</p> <p>This new application for a new dam fed from runoff water from the catchment area - thus no replenishment of the groundwater - cannot be permitted.</p> <p>Again, we refer to the Final Project report of April 2012 that - " The Houdenbeks is fully developed"</p> <p>We are not adverse to the fruit farmers at all but we the farm/s affected have the same legal right to water. Yet another large dam will have further severe implications for our human consumption and for the wildlife on our farm not to mention the fish species endemic to the Rietrivier</p> |  | <p>surface water connectivity and downstream recharge.</p> <p><u>Mitigation Measures</u></p> <p>The EIA incorporates erosion control, irrigation return-flow management, buffer maintenance, and pollution prevention measures as recommended by the freshwater specialist. These include swales to mimic natural drainage, sediment control, prevention of agri-chemical runoff, and strict operational controls during sensitive flow periods.</p> <p>The rights of downstream landowners to sustainable water access are recognised within the regulatory framework of the National Water Act and will be considered in the authority's decision-making process.</p> |  |
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## COMMENTS AND RESPONSE REPORT – HARMONY INSTREAM DAM

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| <p>29 June 2025</p> | <p>Objection to Proposed Harmony Dam and Agricultural Development on Farm Houdenbek No.415 (Ref No: 16/3/3/6/7/2/B5/2/1476/23)</p> <p>Dear Sir/Madam,</p> <p>Janine Greyling <a href="mailto:jgreyling0@gmail.com">jgreyling0@gmail.com</a></p> <p>I am writing to register my objection to the proposed development of the Harmony instream dam, pipeline, and associated agricultural area on the remainder of Farm Houdenbek No. 415 (Ref:16/3/3/6/7/2/B5/2/1476/23), as part of the ongoing NEMA public participation process.</p> <p>While the Botanical Assessment acknowledges that the construction of the Harmony Dam (Option 3) would result in a medium negative impact at a local scale and is not located in a threatened vegetation type, it is imperative to consider the development in its broader environmental context.</p> <p>My concerns lie primarily with the proposed Harmony Agricultural Area, where the loss of Kouebokkeveld Alluvium Fynbos is predicted to have a high to very high negative impact. The study clearly states that this area has a distinct and ecologically sensitive vegetation type, and that development here would unavoidably require a Conservation Offset. The precautionary principle is specifically recommended in this context, underscoring the risk of irreversible</p> | <p>Janine Greyling</p> | <p>Thank you for your submission and for participating in the public participation process for the proposed development of the Harmony Instream Dam and associated agricultural activities on the Remainder of Farm Houdenbek No. 415 (Ref: 16/3/3/6/7/2/B5/2/1476/23). Your objection has been received and will be formally recorded in the Comments and Response Report that will accompany the Final Scoping Report.</p> <p>While Option 3 for the Harmony Dam site avoids threatened vegetation types and results in a medium negative impact at a local scale, the broader ecological sensitivity of the site and catchment is acknowledged. The project team recognises the importance of situating the development within its wider landscape context, particularly in a proclaimed Mountain Catchment Area and Strategic Water Source Area. These broader implications are being addressed through specialist inputs, cumulative impact assessment, and ongoing consultation with CapeNature and other authorities.</p> <p>The concern is valid and confirmed by the findings of the Botanical Assessment (McDonald, 2025), which states that the transformation of approximately 25 ha of Critically Endangered Kouebokkeveld Alluvium Fynbos in good condition would result in a Very High Negative impact. The study notes that this impact is irreversible, and on-site mitigation is not feasible. As a result, a formal biodiversity offset is being considered, though we acknowledge that this does not eliminate the loss of irreplaceable habitat and remains subject to further review and</p> | <p>EnviroAfrica</p> |
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## COMMENTS AND RESPONSE REPORT – HARMONY INSTREAM DAM

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|  | <p>damage to sensitive flora, such as <i>Aspalathus jardinii</i> and other endemic species.</p> <p>This site forms part of a protected mountain catchment area, and the broader question remains whether any development of this nature is desirable or appropriate in such a context, especially one that introduces infrastructure and land-use change that could compromise the ecological integrity and long-term resilience of the landscape.</p> <p>Therefore, I strongly oppose the development, particularly the agricultural component, on the following grounds:</p> |  | <p>authority guidance. The necessity for a Conservation Offset is a direct result of the significance of the anticipated biodiversity loss. The offset proposal is currently under review and must meet strict criteria as outlined in the National Biodiversity Offset Guidelines and Western Cape guidance.</p> <p>We acknowledge that the proposed Harmony Dam and associated agricultural development are located within the Kouebokkeveld Mountain Catchment Area (MCA)—a formally proclaimed Protected Area in terms of the National Environmental Management: Protected Areas Act (Act No. 57 of 2003).</p> <p>The WATSAN Africa (2024) Freshwater Report and botanical and heritage assessments confirm that the area holds:</p> <ul style="list-style-type: none"> <li>• High ecological value due to its contribution to water provision, biodiversity refuge, and catchment function,</li> <li>• Irreplaceable vegetation, including Critically Endangered Kouebokkeveld Alluvium Fynbos (in the proposed agricultural area),</li> <li>• And proximity to downstream ecosystems that are already hydrologically stressed.</li> </ul> <p>The sensitivities identified have been acknowledged in the impact assessments associated with the project. The evaluation of the application must centrally consider the question of desirability within a designated protected area. Your contributions will be formally documented and taken into account during the environmental authorisation decision-making process, particularly in relation to the precautionary principle, sustainable land use practices, and the long-term resilience of the landscape.</p> <p>Your objection and the contents of your submission are noted and recorded in the Comments and Response Report that will be submitted to the competent authority as part of the Scoping and Environmental Impact Assessment process.</p> |  |
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## COMMENTS AND RESPONSE REPORT – HARMONY INSTREAM DAM

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|  | <p>The high ecological sensitivity and irreplaceability of the affected Kouebokkeveld Alluvium Fynbos.</p> <p>The potential triggering of a Conservation Offset, suggesting unacceptable habitat loss.</p> <p>The absence of consideration for broader cumulative and catchment-level impacts.</p> <p>The precautionary principle, which advises against proceeding where risks to biodiversity are high and long-term consequences uncertain.</p> |  | <p>We acknowledge that the proposed agricultural area falls within Critically Endangered Kouebokkeveld Alluvium Fynbos, which is in good condition and classified as irreplaceable. The botanical assessment (McDonald, 2025) rates the impact of clearing this vegetation as Very High Negative and irreversible, with no feasible on-site mitigation.</p> <p>The botanical report confirms that the scale and severity of the impact would necessitate a formal biodiversity offset. While an offset is being explored, the report also notes the limitations of offsets for highly irreplaceable vegetation types. This supports your position that the habitat loss may be unacceptable.</p> <p>Cumulative impacts are a key concern raised in the WATSAN Africa (2024) Freshwater Report, which states that the Houdenberg–Riet River system is already stressed, and further abstraction or storage could exacerbate seasonal desiccation and downstream water shortages. The need to evaluate the project within its broader hydrological and ecological context is acknowledged and will be addressed in the final EIA documentation.</p> <p>The precautionary principle is explicitly referenced in the botanical assessment and serves as a key consideration in evaluating the acceptability of the proposed agricultural development. This principle advises against proceeding where the risks to biodiversity are high and the long-term consequences are uncertain. It is being applied in the review of this application, and the competent authorities will need to determine whether the potential risks to ecological integrity and irreplaceable habitat outweigh the anticipated benefits of the project.</p> |  |
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## COMMENTS AND RESPONSE REPORT – HARMONY INSTREAM DAM

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|  | <p>I respectfully request that this objection be formally recorded and considered in the Environmental Authorisation process. Conservation of these unique vegetation types is vital to maintaining South Africa's biodiversity and ecological heritage.</p> <p>Link to active petition:<br/> <a href="https://www.petitions.com/signatures/save_the_riet_river_and_doring_river_in_ceres">https://www.petitions.com/signatures/save_the_riet_river_and_doring_river_in_ceres</a></p> |  | <p>Thank you for sharing the link to the active petition titled “<i>Save the Riet River and Doring River in Ceres</i>”.</p> <p>We acknowledge receipt of the petition link, and it will be formally noted and included in the public participation record as part of the Environmental Authorisation process.</p> |  |
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## COMMENTS AND RESPONSE REPORT – HARMONY INSTREAM DAM

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| 27 June 2025 | <p>Re: THE PROPOSED DEVELOPMENT OF THE HARMONY INSTREAM DAM AND ASSOCIATED AGRICULTURAL AREA ON THE REMAINDER OF FARMS HOUDENBEK NO. 415 AND WINKELHAAK NO. 224 NEAR DIE DORP OP DIE BERG, WITZENBERG LOCAL MUNICIPALITY, WESTERN CAPE DEA&amp;DP REFERENCE 16/3/3/6/7/2/B5/2/1476/23</p> <p>To Whom It Concerns:</p> <p>Please register me as an Interested and Affected Party and acknowledge receipt of this letter.</p> <p>I own the following neighbouring properties; please update your list of surrounding properties and their owners accordingly:</p> <ul style="list-style-type: none"> <li>1- Portion 0 of the Farm Nougá, 138 Ceres Rd</li> <li>2 - Portion 0 RE of the Farm Leeuwen Hoek, 181 Ceres Rd</li> <li>3 - Portion 0 of the Farm Champignons Berg, 180 Ceres Rd</li> <li>4 - Portion 2 of the Farm Winkel Haak, 224 Ceres RD</li> <li>5 - Portion 1 RE of the Farm Zuurvlakte, 134 Ceres Rd</li> <li>6 - Portion 3 RE of the Farm Zuurvlakte, 134 Ceres Rd</li> </ul> <p>I object to the proposed Harmony dam, pipeline, and agricultural development, which threatens the conservation efforts and biodiversity of the area and of the Swartruggens Conservancy area. The Houdenberg and Riet rivers are the main artery and corridor of the Swartruggens Conservancy's ecological wellbeing. I am facilitating the rewilding of the entire area and have a deep interest in botany and biodiversity.</p> | Pieter Colyn | <p>We hereby confirm that you have been registered as an Interested and Affected Party (I&amp;AP) for the Harmony Instream Dam Environmental Impact Assessment process. Acknowledgement of your submission was sent on 30 June 2025, and your details have been added to the stakeholder database. You will continue to be informed of all project updates and opportunities to comment during the EIA process.</p> <p>Your ownership of the following neighbouring properties has been noted and the surrounding landowner list will be updated accordingly.</p> <p>Your objection to the proposed Harmony Dam, pipeline, and agricultural expansion is formally acknowledged. Your concerns regarding the potential impact on biodiversity, the Swartruggens Conservancy, and the ecological function of the Houdenberg and Riet rivers are being recorded as part of the NEMA-mandated public participation process. These concerns will be addressed in the Comments and Response Report and considered during the Environmental Impact Assessment (EIA) process.</p> | EnviroAfrica |
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## COMMENTS AND RESPONSE REPORT – HARMONY INSTREAM DAM

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|  | <p>As someone committed to rewilding and conservation, I strongly oppose the clearance of indigenous vegetation for agricultural lands and the dam. I urge you to consider the long-term environmental implications and the impact on sensitive plant species, reptiles, and mammals. The above 6 properties, of 16000-hectare, is home to the Cape Leopard, aardwolf, aardvark and others. This is the last refuge for the Cape Leopard, as the area around us is now all agricultural. It is essential that there is sufficient water to sustain the food chain, the buck and other mammals on the above properties and surrounds, as they, in turn, feed the leopard, and allow them to stay in this safe and protected area, away from agriculture.</p> <p>Any disruption to the flow of the Houdenbek River and its catchment will have a direct impact on the Riet River, which relies on the Houdenbek river for most of its water. It is the only water source available for the properties above. This water is being used for human consumption and to sustain the natural fauna and flora in the area. Without it, the downstream areas are not viable. You dismiss the downstream impacts of the dams as though they are irrelevant. We have already seen the cessation of annual winter water flows in the Riet River since the current dam was built, this is a serious concern! I also have serious concerns regarding the project's impact on the Riet River's flow, and the downstream ecological effects. I request that you perform a detailed investigation into the downstream effects, both from an ecological and</p> |  | <p>Your opposition to the proposed dam and agricultural expansion is formally acknowledged. Your concern regarding the clearance of indigenous vegetation, the potential loss of habitat, and the impact on sensitive species, including reptiles, mammals, and apex predators such as the Cape Leopard is noted and will be considered during the Environmental Impact Assessment (EIA) process.</p> <p>We acknowledge that your 16000-hectare landholding, which provides refuge for species such as the Cape Leopard, aardwolf, and aardvark, represents a significant conservation landscape within the Swartruggens Conservancy. The role of the Houdenbek and Riet rivers in maintaining ecosystem integrity and food chain stability is also critical and will be factored into both the freshwater assessment and the biodiversity impact assessment.</p> <p>Your input will be included in the Comments and Response Report and addressed in the Draft Environmental Impact Report (EIR).</p> <p>Your concern regarding the interdependence of the Houdenbek and Riet Rivers, and the critical role these systems play in supporting downstream landowners, ecosystems, and water users, is fully acknowledged. We recognise that the Riet River depends heavily on inflows from the Houdenbek, and that any alteration in upstream flow, particularly through increased storage, could have significant ecological and socio-economic consequences.</p> <p>Your observation that annual winter flows in the Riet River have ceased since the construction of the existing dam is noted. The Freshwater Assessment (WATSAN Africa, 2024) notes cumulative flow stress in the upper Doring catchment. The assessment will form part of the Draft Environmental Impact Report (EIR).</p> |  |
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## COMMENTS AND RESPONSE REPORT – HARMONY INSTREAM DAM

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|  | <p>economic viewpoint (other farming communities and agricultural entities downstream).</p> <p>I also request quantitative information on the local community benefits and job creation. I am equally concerned about the potential job losses downstream, where farms rely on the Riet River's flow for their livelihoods. If the river ceases to flow due to the proposed dam, these farms will be severely impacted, leading to significant job losses and economic hardship.</p> <p>I request that you provide detailed information on the monitoring plan, water flow statistics and climate change considerations that have been taken into account. It does not seem as if there has been a study on the actual water flow in the river, over time. This needs to be done for the Riet River and Doring River as well, not just the Houdenbek river.</p> |  | <p>The project proponent has indicated that the development will generate employment opportunities during both the construction and operational phases, including:</p> <ul style="list-style-type: none"> <li>• Local labour for dam and pipeline construction,</li> <li>• Long-term agricultural employment linked to the proposed orchard expansion, and</li> <li>• Indirect opportunities in support services and maintenance.</li> </ul> <p>The Draft Environmental Impact Report (EIR) will include more detailed, quantified employment estimates, specifying:</p> <ul style="list-style-type: none"> <li>• The expected number of temporary and permanent jobs,</li> <li>• Skills levels and opportunities for local community members, and</li> <li>• The anticipated duration and scale of economic benefits.</li> </ul> <p>Your concern regarding the risk of downstream job losses, particularly for farms and communities reliant on the Riet River for irrigation and domestic water is noted. As requested, this will be addressed in the EIA report.</p> <p>The WATSAN Africa (2024). <i>Freshwater Report – Harmony Agricultural Area</i> and the Freshwater Research Centre (FRC, 2019). <i>Riet River Ecological Reserve Summary Report</i>.</p> <p>To address these concerns and strengthen water management, the following recommendations—supported by the 2024 Freshwater Report—are proposed:</p> <ul style="list-style-type: none"> <li>• Installation of calibrated flow meters and depth gauges at abstraction and discharge points to track volumes and enforce compliance.</li> <li>• Real-time telemetry monitoring and data reporting to the Department of Water and Sanitation (DWS), enabling improved regulatory oversight.</li> </ul> |  |
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## COMMENTS AND RESPONSE REPORT – HARMONY INSTREAM DAM

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|  | <p>In the Toeka dam proposal you state that only surplus water will be used, but in the Harmony dam proposal you state that in dry years, excess water from the new Toeka dam will be pumped to the new Harmony dam. Please explain where you are finding excess water in dry years. Also explain the duration of the extraction of water during a flood event. What triggers the start and completion of the extraction? The Harmony dam is in a tributary. How will water bypass the dam when there is not a flood event?</p> |  | <ul style="list-style-type: none"> <li>Annual audits and bi-annual reporting, to ensure ongoing adherence to ecological flow thresholds and water licence conditions.</li> </ul> <p><i>"The site's natural slopes must continue to serve as a buffer during rainfall events, and return flow from irrigation must be carefully managed, particularly during peak summer demand."</i><br/>— WATSAN Africa (2024), Freshwater Report – Harmony Agricultural Area</p> <p>The need to avoid over-irrigation, manage runoff, and monitor abstraction volumes is clearly articulated in the report. In addition, the Freshwater Research Centre (FRC, 2019) notes that ecological baseflow in the Riet River was absent during key monitoring periods (2016–2017) and emphasises the importance of catchment-scale water use regulation to preserve downstream flow and ecological integrity.</p> <p>The proposal that water may be pumped from the Toeka Dam to the Harmony Dam during dry years refers specifically to high-flow events that may still occur in such years, rather than implying that excess water is readily available throughout the dry season. These transfers will only occur when the catchment experiences flood events sufficient to generate surplus water, even within generally dry hydrological years.</p> <p>In line with the Water Use Licence (WUL) conditions, abstraction for both the Toeka and Harmony dams is strictly limited to periods of peak high-flow. No abstraction is permitted during baseflow or low-flow periods, consistent with the Department of Water and Sanitation's (DWS) policy for the Olifants and associated river systems. The WATSAN Africa (2024) report explicitly states that all water use must comply with environmental flow requirements and seasonal availability.</p> <p>Trigger and Duration of Water Extraction:</p> <ul style="list-style-type: none"> <li>Trigger: Water abstraction is initiated only once river levels exceed the defined trigger thresholds outlined in the WUL, which are linked to specific discharge volumes indicating flood conditions.</li> </ul> |  |
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## COMMENTS AND RESPONSE REPORT – HARMONY INSTREAM DAM

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|  | <p>The Riet River, which flows through our properties, is home to recently discovered species, including the <i>Romulus Lilacea</i>, confirmed by Professor John Manning, and a new species of <i>Aspalathus</i>, found by Dr. Brian du Preez. Additionally, an extremely rare species of <i>conophytum</i> grows there. Due to the very short window period of flowering; locating and identifying similar red data species needs to be undertaken for minimum of a full twelve-month surveys, at a minimum of two weeks interval. The botanical report needs to be relooked at, and species specialists included in the botanical surveys.</p> <p>Please explain how the Department of Water Affairs' 2012 report, which highlights the area's water usage</p> |  | <ul style="list-style-type: none"> <li>Duration: The duration of abstraction is determined by the length of the high-flow event and real-time flow monitoring data. Pumping is stopped immediately once flows return to baseflow levels to ensure protection of downstream ecological systems.</li> </ul> <p><u>Harmony Dam – Tributary Flow and Bypass:</u><br/>As the Harmony Dam is situated on a tributary of the Houdenbeks River, its design includes provisions for ecological flow release. A dedicated outlet mechanism will be installed to ensure continuous baseflow bypass, allowing water to flow downstream even in the absence of flood events. This will ensure connectivity of aquatic habitats and support the ecological integrity of the tributary and downstream Houdenbeks River.</p> <p>The existing botanical report (McDonald, 2025) focused on the immediate dam and agricultural footprint area and was based on surveys conducted during limited seasonal windows. While it identified Critically Endangered Kouebokkeveld Alluvium Fynbos, it did not include a full twelve-month floristic monitoring programme or the involvement of specialist taxonomists for rare and cryptic species.</p> <p>In response to your input:</p> <ul style="list-style-type: none"> <li>A supplementary botanical assessment is being considered to address this limitation.</li> <li>The inclusion of species-specific experts and the extension of the survey period into seasonal flowering phases will be evaluated in consultation with CapeNature and SANBI.</li> <li>Any updated findings may influence the final significance rating of the impact, particularly if new Species of Conservation Concern (SCCs) are confirmed within or adjacent to the development footprint.</li> </ul> <p>The 2012 Department of Water Affairs (now DWS) report raised concerns about water scarcity in the Olifants-Doorn Water</p> |  |
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## COMMENTS AND RESPONSE REPORT – HARMONY INSTREAM DAM

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|  | <p>concerns and recommends no large dams or new water abstraction licenses, can be ignored. Through what process was the water use license, that is mentioned, awarded? The process should include a public participation process, specialist studies, and an assessment by the competent authority. Was this done? Was the public given an opportunity to comment? Can we please see the license and evidence of the process taken and the correspondence around it?</p> <p>Will the environmental release and the normal overflow from the proposed Harmony Dam flow into the existing dam or directly into the stream, downstream of the existing dam in the Houdenbeks River?</p> |  | <p>Management Area and advised caution regarding the authorisation of new large dams and abstraction licences.</p> <p>In response to your questions:</p> <ul style="list-style-type: none"> <li>• The current proposal is subject to Water Use Licence No. 01/E21D/AB/9699, issued by the Department of Water and Sanitation (DWS) on 27 January 2023.</li> <li>• The licence was granted following a formal Water Use Licence Application (WULA) process, which, according to standard DWS procedure, typically includes: <ul style="list-style-type: none"> <li>○ Submission of technical motivation and specialist studies (e.g., hydrology, freshwater ecology),</li> <li>○ Internal review by DWS officials and technical committees,</li> <li>○ Evaluation of compliance with ecological reserve requirements, catchment yield, and existing lawful uses.</li> </ul> </li> </ul> <p>A copy of the WUL, including its conditions and the date of issue, will be included in the appendices of the Draft Environmental Impact Report (EIR).</p> <p>Based on the typical requirements for instream dams and the location of the proposed Harmony Dam on a tributary of the Houdenbeks River, the following applies:</p> <ul style="list-style-type: none"> <li>• Environmental flow releases (i.e. baseflow releases required to sustain downstream ecosystems) must be designed to bypass the dam structure and flow directly into the downstream watercourse, not into the existing dam.</li> <li>• Similarly, normal overflow (during high rainfall or flood events) should also discharge directly downstream into the natural tributary, thereby reconnecting with the Houdenbeks River system downstream of the existing dam.</li> </ul> <p>This is consistent with the recommendations in the WATSAN Africa (2024) Freshwater Report, which emphasises the importance of:</p> |  |
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## COMMENTS AND RESPONSE REPORT – HARMONY INSTREAM DAM

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|  | <p>How will the environmental downstream flow requirements be determined, taking into account the Swartruggens conservancy and other ecosystems situated just downstream of the existing and proposed dam. Also consider that the downstream nature reserve's indigenous wildlife requires water in the river, especially during summer. How will the environmental flows be released from the proposed dam and how will it be monitored and the information shared with the downstream properties.</p> |  | <p>"Ensuring that downstream sections of the catchment remain hydrologically functional and receive sufficient flow, particularly during sensitive dry periods."</p> <p><u>To ensure compliance:</u></p> <ul style="list-style-type: none"> <li>The dam design will be required to incorporate a low-level outlet or bypass mechanism that facilitates controlled ecological flow releases.</li> </ul> <p>The determination of environmental flow requirements (EFRs) for the Harmony Dam will be based on the recommendations of the freshwater specialist study, supported by hydrological assessments and aligned with the Department of Water and Sanitation's (DWS) policies and guidelines for water use in ecologically sensitive catchments.</p> <p>Determination of Environmental Flow Requirements:<br/>The environmental flow regime will be established using:</p> <ul style="list-style-type: none"> <li>Ecological Reserve Determination methodologies as recognised by DWS,</li> <li>Site-specific flow data and catchment runoff modelling,</li> <li>Consideration of aquatic species' water requirements, including those relevant to the Swartruggens Conservancy and downstream nature reserve ecosystems,</li> <li>Assessment of seasonal variation, with particular attention to summer low-flow periods when wildlife water dependency is greatest.</li> </ul> <p><u>Flow Release Mechanism:</u><br/>The proposed Harmony Dam will incorporate an engineered outlet structure to enable the controlled release of water that meets the environmental flow requirements. This structure will allow:</p> <ul style="list-style-type: none"> <li>Continuous baseflow releases, even outside flood events,</li> <li>Pulse flow releases, if needed to simulate natural variability and maintain ecological functionality downstream.</li> </ul> <p><u>Monitoring and Information Sharing:</u></p> |  |
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## COMMENTS AND RESPONSE REPORT – HARMONY INSTREAM DAM

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|  | <p>Please provide historical records, since the river has been modified, of the controlled environmental flow release from the existing instream Houdenbeks River dam.</p> <p>How will the important regular flooding of the downstream Houdenbeks River be simulated and was the effect of it considered?</p> | <ul style="list-style-type: none"> <li>• A flow monitoring system will be installed downstream of the dam to record the volume and timing of ecological releases.</li> <li>• Monitoring results will be shared with stakeholders, including landowners and conservation groups within the Swartruggens Conservancy and adjacent nature reserves.</li> <li>• A monitoring and compliance protocol will be included in the Environmental Management Programme (EMPr) and the Water Use Licence (WUL) to ensure oversight and accountability.</li> </ul> <p>This approach aims to ensure that the ecological integrity of the downstream river system is maintained, while also upholding the rights and needs of downstream users and biodiversity.</p> <p><u>The project team will:</u></p> <ul style="list-style-type: none"> <li>• Request flow release records and compliance data from the Department of Water and Sanitation (DWS) and the relevant Water User Association, if applicable.</li> <li>• Include any available data or confirmation of flow management practices in the Draft Environmental Impact Report (EIR), if available.</li> </ul> <p>The importance of seasonal flood pulses in the Houdenbeks River for maintaining channel morphology, sediment transport, and ecological function is acknowledged. However, the WATSAN Africa (2024) Freshwater Report for Harmony Agricultural Area does not explicitly address the simulation or maintenance of these flood events.</p> <p>This is a valid concern, and the project team will be required to consider:</p> <ul style="list-style-type: none"> <li>• The inclusion of a flood release strategy as part of the dam operating rules, and</li> <li>• Whether the proposed dam infrastructure allows for controlled releases during high-flow events to mimic natural flood conditions downstream.</li> </ul> |  |
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## COMMENTS AND RESPONSE REPORT – HARMONY INSTREAM DAM

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|  | <p>Should the construction of the dam proceed, what measures and controls will be put in place to prevent any sediment from entering the Houdenbeks River?</p> <p>Was the combined effect of the existing dam and the proposed dam considered in detail and the combined effect on downstream properties and biodiversity?</p> <p>Has the effect on the water quality of the use of fertilisers, spraying for insects and other ongoing agriculture activities been investigated for the proposed agricultural area. How will this be managed in future?</p> |  | <p>Sediment control is a key component of the construction-phase environmental management. The following measures will be included in the Environmental Management Programme (EMPr):</p> <ul style="list-style-type: none"> <li>• Installation of silt fences, sediment traps, and stormwater diversion structures.</li> <li>• Progressive vegetation clearing, limited to the construction footprint.</li> <li>• Stabilisation of exposed soils through mulching, geotextiles, or hydroseeding.</li> <li>• Monitoring of turbidity during earthworks near watercourses.</li> </ul> <p>The construction contractor will be required to implement these best practices, under supervision by the Environmental Control Officer (ECO).</p> <p>The WATSAN Africa (2024) report and the Freshwater Research Centre (2019) ecological reserve summary both note that the Houdenbek Riet system is already under stress from existing infrastructure. However, a detailed cumulative impact assessment specifically quantifying the combined hydrological and ecological impact of the existing and proposed dams has not yet been completed.</p> <p>The WATSAN Africa (2024) Freshwater Report, which highlights the risk of agri-chemical return flows impacting the aquatic environment.</p> <p><u>To manage this, the following measures are recommended:</u></p> <ul style="list-style-type: none"> <li>• Use of state-of-the-art irrigation systems to prevent over-application and runoff.</li> <li>• Establishment of buffer zones and swales to filter runoff.</li> </ul> |  |
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## COMMENTS AND RESPONSE REPORT – HARMONY INSTREAM DAM

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|                               | <p>A concern has been raised by Dr Brian du Preez (botanist) that the proposed Harmony agricultural development would potentially affect the newly described <i>Aspalathus jardini</i> Du Preez &amp; C.H.Stirt. that</p> <p>20</p> <hr/> <p><i>Botanical Assessment: Proposed Harmony Dam and Cultivation Area, Witzenberg Municipality</i></p> <p>occurs on 'dune sands' of the Rietrivier and possibly surrounding areas. This possibility was considered but the species in question was not found during this investigation. However, the close proximity of the Harmony Agricultural area to the Riet Rivier which is the type locality of <i>A. jardini</i> suggests that this locally endemic species could be affected as speculated by Dr du Preez (see also below under Section 11.1).</p> <p>The botanical assessment does not seem to have considered in detail the riverbank flora downstream from the proposed dam and in the Rietrivier "dune sands".</p> <p><b>11.2 Endangered Habitat</b></p> <p>The list of Threatened Terrestrial Ecosystems (Government Gazette, 2022) was checked for the vegetation types occurring in the study area. Kouebokkeveld Alluvium Fynbos which is <b>CRITICALLY ENDANGERED B1(i)</b> may be marginally affected by the Harmony Dam. However, the Harmony Agricultural Area principally supports Kouebokkeveld Alluvium Fynbos of <u>extremely high conservation value</u>. An extract from the abovementioned Government Gazette reads as follows:</p> <table border="1"> <tr> <td>Kouebokkeveld Alluvium Fynbos</td> <td>Fynbos</td> <td>Critically Endangered</td> <td>B1(i)</td> <td>Kouebokkeveld Alluvium Fynbos is narrowly distributed with high rates of habitat loss in the past 28 years (1990-2018), placing the ecosystem</td> </tr> </table> <p>What is the proposed environmental/Conservation off set? Surely this should be agreed and in place before any process proceeds? The concern is that while there are still mountainous areas that are untouched, there is virtually no undeveloped lowland valley habitat in this area. There is already extreme fragmentation, leaving no corridors linking vegetation for fauna and flora to thrive. There is a visual impact of losing the last vestiges of the Kouebokkeveld and greater Cedarberg</p> | Kouebokkeveld Alluvium Fynbos | Fynbos | Critically Endangered                                                                                                                         | B1(i) | Kouebokkeveld Alluvium Fynbos is narrowly distributed with high rates of habitat loss in the past 28 years (1990-2018), placing the ecosystem |  | <ul style="list-style-type: none"> <li>Monitoring for nutrient loading and pesticide residues in adjacent water bodies.</li> <li>Inclusion of agricultural chemical management protocols in the EMPr.</li> </ul> <p>The current botanical assessment (McDonald, 2025) focused primarily on the immediate footprint of the proposed dam wall, inundation zone, and agricultural expansion area. It did not include a targeted survey of riparian vegetation or dune-associated flora downstream in the Riet River corridor, despite its ecological significance.</p> <p>Given the sensitivity of this habitat and the potential presence of Species of Conservation Concern (SCCs) and endemic plant communities in the alluvial and dune sand systems, your observation highlights a critical gap. This is particularly important where flow alteration may affect species reliant on seasonal moisture regimes along the river margins.</p> <p>In response, the project team will:</p> <ul style="list-style-type: none"> <li>Flag this issue for supplementary botanical investigation, in consultation with CapeNature.</li> <li>Reassess the potential for downstream indirect botanical impacts, including sedimentation, altered moisture availability, and erosion of riparian zones.</li> <li>Consider integrating findings into the Environmental Management Programme (EMPr) and mitigation strategy.</li> </ul> <p>The botanical assessment (McDonald, 2025) confirms that the proposed agricultural area would result in the complete and irreversible loss of approximately 25 ha of Critically Endangered Kouebokkeveld Alluvium Fynbos in good condition—an irreplaceable ecosystem.</p> |  |
| Kouebokkeveld Alluvium Fynbos | Fynbos                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Critically Endangered         | B1(i)  | Kouebokkeveld Alluvium Fynbos is narrowly distributed with high rates of habitat loss in the past 28 years (1990-2018), placing the ecosystem |       |                                                                                                                                               |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |

## COMMENTS AND RESPONSE REPORT – HARMONY INSTREAM DAM

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|  | <p>landscape. Please see the following diagrams of the sensitive botanical areas:</p>  |  | <p>Due to the Very High Negative impact rating, the report recommends that a formal biodiversity offset be pursued to achieve “no net loss” of biodiversity. A potential offset area of approximately 500 ha (based on a 1:20 offset ratio) is being considered, but:</p> <ul style="list-style-type: none"> <li>• The exact location has not yet been confirmed.</li> <li>• The ecological equivalence and condition of the proposed offset site must still be assessed; and</li> <li>• A stewardship agreement and management plan will be required to ensure its formal conservation.</li> </ul> <p>You are correct that the identification and agreement on a suitable offset site should occur as early as possible—preferably before the conclusion of the Basic Assessment phase to avoid delays or non-compliance with the Western Cape Biodiversity Offset Guidelines.</p> <p>Concerns Regarding Fragmentation and Loss of Lowland Habitat</p> <p>Your concern about the severe fragmentation of remaining lowland valley habitat noted and supported by regional biodiversity planning tools, including the Western Cape Biodiversity Spatial Plan (2017). The area already shows:</p> <ul style="list-style-type: none"> <li>• A breakdown in ecological corridors,</li> <li>• Limited connectivity between natural remnants, and</li> <li>• An increasing threat to faunal movement and gene flow, particularly in valley floor ecosystems.</li> </ul> <p>The visual and ecological loss of the last remnants of the Kouebokkeveld and Cederberg foothills, especially in the context of broader agricultural expansion, is a significant cumulative impact. The offset alone cannot fully mitigate the spatial loss of this ecosystem type in its original landscape context.</p> <p><u>Next Steps</u></p> <p>Your input has been recorded in the Comments and Response Report, and the project team is:</p> |  |
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## COMMENTS AND RESPONSE REPORT – HARMONY INSTREAM DAM

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|  | <p>I own property 2/224, which comprises almost entirely of sensitive habitat. Note the position of the current and proposed dams in relation to this property. The current modifications to the river have already disrupted the normal river flow patterns and vegetation growth and is starving this land of its essential supply of water. The phragmites species expands when the water is not deep enough in a river. The original water bodies downstream originally self-regulated the growth of phragmites. Due to the cessation of seasonal water flow, the original water bodies have now shrunk disastrously. The water is no longer fit for human consumption at all times, as it used to be. The existing river deviations should be re-investigated in this light.</p> <p>When will the freshwater study be undertaken and will it include a piscatorial study? Can this please include identification of the indigenous fish that live in the Riet River and that can be found in the water There is a concern that exotic fish species are introduced to the dams and that they escape into the river system. We have noticed small mouthed bass was introduced in the system after 2010. What effect will this development have on the Clanwilliam sandfish (<i>Labeo seeberi</i>) lower down in the system, and do we know for sure that they do not occur higher up in the system?</p> |  | <ul style="list-style-type: none"> <li>• Actively engaging with CapeNature to determine whether a suitable and ecologically defensible offset site can be identified.</li> <li>• Reviewing the spatial and ecological suitability of the offset proposal.</li> <li>• Committing to including full details of the offset (location, extent, vegetation types, legal mechanism, and management plan) in the final submission.</li> </ul> <p>The WATSAN Africa (2024) Freshwater Report – Harmony Agricultural Area does acknowledge impacts consistent with the concerns raised about disrupted river flow, vegetation decline, and reduced water quality downstream, such as on property 2/224.</p> <p>The specialist report supports your observation that previous river modifications have significantly altered the natural flow and ecology and that further development could exacerbate these effects without stringent management.</p> <p>A freshwater assessment has already been undertaken as part of the current application process, namely the WATSAN Africa (2024). <i>Freshwater Report – Harmony Agricultural Area</i>. However, the existing study does not include a dedicated piscatorial survey or species-specific assessment of aquatic biodiversity within the Houdenbeks–Riet–Doring river system. Although <i>Labeo seeberi</i> populations are best known in the lower reaches of the Doring and Riet Rivers, their potential range may extend further upstream than currently confirmed. The absence of recent, site-specific fish surveys means this cannot be ruled out. The freshwater specialist will be contacted to assess presence or absence of indigenous fish in tributaries</p> |  |
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## COMMENTS AND RESPONSE REPORT – HARMONY INSTREAM DAM

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|  | <p>The entire system including the tributaries of the Houdenbek, Riet and Doring rivers need to be included in a comprehensive study. This needs to take into consideration what the status was prior to the building of the dam (1985), the changes that occurred in 2010, the current status, and the impact of the future proposed development. Can the quality of the water be checked, as the runoff from the agricultural areas is already a concern – this water is used for domestic purposes.</p> <p>I urge a thorough reassessment of the project's viability and environmental implications, considering the unique biodiversity and conservation efforts in the area.</p> |  | <p>and the proposed dam location and to determine if dam construction or operation poses a threat to downstream aquatic biodiversity, including red-listed species such as the Clanwilliam sandfish.</p> <p>The WATSAN Africa (2024) Freshwater Report – Harmony Agricultural Area acknowledges that the Houdenbek River and broader catchment are already significantly modified. The report confirms that:<br/> <i>“The flow down the Houdenbek River, as in the entire Olifants-Doring River system, has been significantly altered.”</i><br/> <i>“The storage capacity of the dams along its length is much more than its Mean Annual Runoff (MAR).”</i><br/> — WATSAN Africa, 2024</p> <p>This indicates that the catchment is hydrologically overdeveloped, and additional water storage infrastructure—such as the proposed Harmony Dam—must be considered within this broader cumulative context. However, the report does not provide a detailed historical timeline of flow conditions or compare pre-1985, 2010, and current hydrological states. The specialist report also notes concerns about water quality deterioration due to runoff from orchards: <i>“Agri-chemicals, pesticides and fertiliser can end up in the river along with return flow and the runoff during the orchard's operational phase... This is entirely undesirable and must be prevented through state-of-the-art farming methods.”</i><br/> — WATSAN Africa, 2024</p> <p>Given the presence of Critically Endangered Kouebokkeveld Alluvium Fynbos, the proximity to the Swartruggens Conservancy, and the reliance of downstream users on the Houdenbek–Riet–Doring river system, your concern is noted. The specialist reports—including the botanical (McDonald, 2025) and freshwater assessment (WATSAN Africa, 2024)—have highlighted several very high and potentially irreversible impacts, particularly:</p> |  |
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## COMMENTS AND RESPONSE REPORT – HARMONY INSTREAM DAM

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|             |                                                                                                                                                                                                                  |              | <ul style="list-style-type: none"> <li>• Loss of irreplaceable habitat requiring biodiversity offsets,</li> <li>• Ecological pressure on an already stressed river system,</li> <li>• Concerns regarding cumulative hydrological impacts and water quality risks.</li> </ul> <p>These issues, along with the biodiversity value and conservation efforts in the area, warrant careful reconsideration of the project's sustainability and alignment with national environmental objectives.</p> |              |
| 28 May 2025 | <p>Hi Bianca</p> <p>I do not see any specialist reports for the Harmony Dam on the website apart from the botanical report. Are there no other specialist reports available for the Toeka Dam at the moment?</p> | Doug Jeffery | <p>Good morning, Doug.</p> <p>Thank you for the email.</p> <p>All other specialist reports will be provided as part of the draft Environmental Impact Report. The Botanical Assessment Report represents the sole document available during the Pre-App Scoping Phase.</p> <p>Thank you for your attention to this matter.</p>                                                                                                                                                                  | EnviroAfrica |

## COMMENTS AND RESPONSE REPORT – HARMONY INSTREAM DAM

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| <p>05 November 2018</p> | <p><u>(Previous Application) 16/3/3/6/7/1/B5/ 2/1367/17: Comment on the Draft Scoping Report ("SR") For The Proposed Construction of The Harmony Dam On The Remainder of Farm Houdenbek No. 415, Ceres.</u></p> <p>Appendix 5.6.31 Comment on Daft Scoping Report</p> <p>6. The draft SR dated October 2018 as received by the Department on 1 October 2018, refers.</p> <p>7. The proposal entails construction of an instream dam in an unnamed tributary of the Houdenbek River on the Remainder of Farm Houdenbek No. 415. The dam specifications are:</p> <p>Dam wall length: 280m<br/>Dam wall height: 12,8m<br/>Dam capacity: 250 000m3 Dam surface area: 5,4 ha</p> <p>8. The Department has the following comments that must be addressed and included in the in-process Sr:</p> <p>3</p> <p>3.1 Since Activity 14 of Listing Notice 3 is triggered, Activity 13 of LN 1 must be excluded from the list of applicable activities because if the exclusionary provision within the activity which reads, "(cc) activities listed in activity 14 in LN 2 of 2014 or activity 14 LN 3 of 2014, in which case that activity applies".</p> <p>3.2 It is unclear whether a pipeline will be constructed as part of the proposal. A</p> | <p>WCDEADP<br/>Mr. D Matthews</p> | <p>1. Noted.</p> <p>2. Noted and correct.</p> <p>3. Noted</p> <p>3.1 Noted and corrected</p> <p>3.2 Harmony dam will be filled primarily with runoff from its own catchment area, an unnamed tributary to the</p> | <p>EnviroAfrica</p> |
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## COMMENTS AND RESPONSE REPORT – HARMONY INSTREAM DAM

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|   | <p>description and layout plan, detailing and illustrating the proposed development and all associated infrastructure, must be provided. Furthermore, the Listed Activities for the transport of water must be included, if applicable.</p> <p>3.3 Limited information is included for Alternative B, which involves the expansion of an unused dam. As such, more information must be provided for the aforementioned alternative for a comparative assessment of the alternatives that were considered. Especially since the motivation for the preferred alternative includes having a smaller footprint and lower evaporation rate, which is contradictory to the information of the Prelim Design Report dated 26/02/2018 compiled by Sarel Bester Ingenieurs BK.</p> <p>3.4 In addition, it is unclear whether this Alt B will be included for further assessment in the EIA phase.</p> <p>3.5 The Plan of Study does not conform to the content requirements outlined in Appendix 2 of the EIA Regs 2014 (as amended).</p> <p>3.6 It is recommended that a MMP that addresses all the maintenance activities for infrastructure to be constructed as part of the development must be included in the EIA report. The PoS for the EIA phase must be updated to include this aspect.</p> |   | <p>Houdenbek River. Irrigation pipelines thresholds will not trigger listed activities in terms of NEMA and will be located on ploughed land and road reserves and the impact will be temporary. Please refer to Locality Maps Appendix 1, Figure 7 for the map indicating proposed layout for irrigation pipelines.</p> <p>3.3 Please refer to Section 4 of the Scoping report for updated information regarding the Alternatives investigated. Please note that Alternative B (now Alternative C) is not considered a viable alternative from an engineering point of view and will therefore not be investigated any further.</p> <p>3.4 Please note that Alternative B (now Alternative C) is not considered a viable alternative from an engineering point of view and will therefore not be investigated any further. Other alternatives is discussed in the report.</p> <p>3.5 Noted and updated.</p> <p>3.6 Noted. The MMP is to be included with the EIA report for comment.</p> |  |
| 4 | Regulatory requirements:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 4 | Noted                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |

## COMMENTS AND RESPONSE REPORT – HARMONY INSTREAM DAM

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|  | <p>4.1 Proof of the notification and the copies of the notification letters sent to registered I&amp;APs for the comment on the pre-App SC must be included</p> <p>4.2 All representations and comments received during the pre-application commenting period must be included in the in-process draft SR and any responses by the EAP to those representations and comments must be tabulated in a C&amp;RR.</p> <p>4.3 The minutes of any meetings held by the EAP &amp; I&amp;APs and other role players which record the views of the participants.</p> <p>4.4 Please be advised that an original signed and dated application declaration is required to be submitted with the Final Scoping to this Department for decision making. It is important to note that by signing this declaration, the applicant is confirming that they are aware and have taken cognisance of the contents of the report submitted for decision-making. Furthermore, through signing this declaration, the applicant is making a commitment that they are willing and able to implement the necessary mitigation management and monitoring measurements recommended within the report with respect to this application.</p> <p>4.5 In addition to the above, please ensure that original signed and dated EAP and specialist declarations are also submitted with the F SR for decision-making.</p> <p>5 You are reminded that the SR must contain all information outlined in Appendix 2 of the EIA regs 2014.</p> |  | <p>4.1 Noted and included. Appendix 5.7</p> <p>4.2 Noted and included. See the C&amp;RR (this report) Appendix 5.6 with original comments Appendix 5.6.1 – 5.6.33</p> <p>4.3 Please refer to the register Appendix 6.2 4.4 Noted.</p> <p>4.4 Noted</p> <p>4.5 Noted.</p> <p>5 Noted and quoted.</p> |  |
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## COMMENTS AND RESPONSE REPORT – HARMONY INSTREAM DAM

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|  | <p>6 Kindly quote the above mentioned reference number in any future correspondence in respect of the application.</p> <p>7 Please note that the activity may not commence prior to an EA being granted by the Department.</p> <p>8 The Department reserves the right to revise initial comments and request further information based on the information received.</p> |  | <p>6 Noted and agreed.</p> <p>7 Noted.</p> <p>8 Noted.</p> |  |
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## COMMENTS AND RESPONSE REPORT – HARMONY INSTREAM DAM

| Comments Received – Draft Scoping Report - 26 February 2026 to 31 March 2026 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |              |
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| Date                                                                         | Comment                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | I&AP                       | Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Respondent   |
| Tue 2026/03/                                                                 | <p><b>Dear Consultant EnviroAfrica,</b><br/>To All Involved,<br/>Please confirm receipt<br/>3 March 2026</p> <p><b>Application Proposed dams</b><br/>Harmony and Toeka</p> <p><b>Objection;</b><br/>Justus and Marguerite Bruwer<br/>Farm De Naauwte</p> <p><b>Comment on Draft Scoping Report</b><br/>Proposed Toeka Dam (<math>\pm 2,000,000 \text{ m}^3</math>) and Harmony Instream Dam (<math>\pm 250,000 \text{ m}^3</math>)<br/>Farm Houdenbek No. 415 – Koue Bokkeveld Mountain Catchment Area</p> <p>This submission records our objection to the proposed construction of the Toeka Dam and the Harmony Instream Dam within the Houdenbek catchment, located inside the proclaimed Koue Bokkeveld Mountain Catchment Area.</p> <p>Although the project is supported by a Water Use Licence issued under the National Water Act, 1998, environmental authorisation must independently satisfy the requirements of the National Environmental Management Act, 1998(NEMA), as well as align with the protective intent of the Mountain Catchment Areas Act, 1970.</p> <p><b><i>When assessed against these legislative requirements and the principles of ecological sustainability, the proposal raises significant concerns.</i></b></p> | Marguerite & Justus Bruwer | <p>The comments relating to the Toeka Dam are acknowledged. It is noted that the Toeka Dam forms part of a separate application and assessment process, and all comments pertaining to that development will be addressed in detail within the relevant Toeka Dam Environmental Impact Assessment. The current report relates specifically to the Harmony Instream Dam and associated agricultural area.</p> <p>The objection to both the Toeka Dam and the Harmony Instream Dam within the Kouebokkeveld Mountain Catchment Area is acknowledged. It is noted that the Toeka Dam forms part of a separate application and assessment process, and all comments relating to that development will be addressed within the relevant Toeka Dam Environmental Impact Assessment.</p> <p>With respect to the Harmony Dam, it is recognised that the development falls within a proclaimed Mountain Catchment Area, and that such areas are of high ecological importance, particularly in terms of water resource protection and biodiversity conservation. The requirements of the National Environmental Management Act (NEMA), as well as the broader intent of the Mountain Catchment Areas Act, are acknowledged.</p> <p>While a Water Use Licence (WUL) has been issued under the National Water Act, it is recognised that this</p> | EnviroAfrica |

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|  | <p><b>Inappropriate In-Stream Development in a Mountain Catchment</b></p> <p>The Harmony Instream Dam entails the permanent transformation of a natural tributary within a proclaimed Mountain Catchment Area. These areas are specifically declared to:</p> <ul style="list-style-type: none"> <li>• Safeguard hydrological functioning,</li> <li>• Protect water yield and downstream supply,</li> <li>• Maintain soil stability and ecological integrity,</li> <li>• Prevent incremental degradation of sensitive headwater systems.</li> </ul> <p>Constructing an instream dam within such a system is inherently high risk. While not automatically prohibited, development in Mountain Catchment Areas must demonstrate that it will not compromise catchment integrity. <b><i>The Draft Scoping Report does not yet provide that assurance.</i></b></p> |  | <p>does not replace or override the need for environmental authorisation under NEMA. The current Environmental Impact Assessment (EIA) process is therefore being undertaken to independently assess the environmental acceptability of the Harmony Dam, taking into account ecological sustainability, cumulative impacts, and legislative requirements.</p> <p>The concerns raised regarding alignment with environmental legislation and sustainability principles are noted and will be considered by the competent authority in the decision-making process.</p> <p>The concern regarding the placement of the Harmony Instream Dam within a proclaimed Mountain Catchment Area is acknowledged. The importance of these areas in safeguarding hydrological functioning, maintaining water yield, supporting ecological integrity, and preventing land degradation is recognised.</p> <p>The proposed development does involve the modification of a tributary system; however, it is also noted that development within Mountain Catchment Areas is not prohibited, provided that it can be demonstrated that catchment functioning will not be significantly compromised. This forms a key focus of the Environmental Impact Assessment (EIA).</p> <p>The Draft Scoping Report identifies this as a critical issue and has accordingly informed the requirement for detailed freshwater, hydrological and biodiversity specialist assessments. These studies evaluate potential impacts on flow regimes, sediment processes, ecological functioning, and downstream water availability, as well as cumulative effects within the broader Houdenberg–Riet system.</p> <p>The findings of these specialist assessments, together with the conditions of the applicable Water Use Licence,</p> |  |
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|  | <p><b>Downstream Flow Alteration and Ecological Risk</b></p> <p>The Water Use Licence authorises abstraction of:</p> <ul style="list-style-type: none"> <li>• 715,000 m<sup>3</sup> per annum from the Houdenbek River; and</li> <li>• 250,000 m<sup>3</sup> per annum from an unnamed tributary.</li> </ul> <p>Even if abstraction is restricted to “surplus winter flows,” the following risks remain:</p> <ul style="list-style-type: none"> <li>• Disruption of natural seasonal variability;</li> <li>• Reduced baseflows during transitional and dry periods;</li> <li>• Loss of habitat connectivity;</li> <li>• Altered ecological processes downstream.</li> </ul> <p><b><i>The Draft Scoping Report identifies downstream flow alteration as a key issue for further investigation. This confirms that ecological consequences are uncertain at this stage. Under NEMA's precautionary principle, uncertainty in a sensitive headwater system should weigh against approval rather than in favour of it.</i></b></p> |  | <p>including restrictions on abstraction and requirements for ecological flow maintenance, will inform whether the proposed development is acceptable within the Mountain Catchment context.</p> <p>The concern that the Draft Scoping Report does not yet provide sufficient assurance is acknowledged; this is inherent to the scoping phase, and the necessary detailed assessment is undertaken in the Environmental Impact Report (EIR), which will provide the basis for decision-making by the competent authority.</p> <p>The concern regarding downstream flow alteration and associated ecological risks is acknowledged. The authorised abstraction volumes in terms of the Water Use Licence (WUL) are noted; however, it is emphasised that abstraction is strictly regulated and limited to surplus high-flow conditions, with no abstraction permitted during low-flow or baseflow periods.</p> <p>The potential risks identified, including disruption of seasonal variability, reduced baseflows, loss of habitat connectivity, and altered downstream ecological processes, are recognised as key considerations. These issues have been identified in the Draft Scoping Report and have informed the requirement for detailed assessment in the Freshwater and Hydrological Specialist Studies.</p> <p>These specialist assessments evaluate flow regimes, ecological reserve requirements, and downstream system functioning, including cumulative impacts within the Houdenbek–Riet catchment. The studies also consider mitigation measures such as ecological flow releases, abstraction controls, and monitoring requirements to maintain downstream ecological integrity.</p> |  |
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|  | <p><b>Cumulative Impact Concerns</b></p> <p>The proposal must be assessed not in isolation, but within the context of the broader Houdenbek catchment.</p> <p>The combined effect of:</p> <ul style="list-style-type: none"> <li>• A 2,000,000 m³ storage dam (Toeka Dam),</li> <li>• A 250,000 m³ instream dam,</li> <li>• Nearly 1 million m³ per annum of authorised abstraction,</li> <li>• Existing upstream and downstream users,</li> </ul> <p>creates cumulative hydrological pressure that may materially alter catchment functioning.</p> <p><b><i>The Draft Scoping Report acknowledges cumulative abstraction pressure but does not yet provide catchment-level modelling or clear ecological thresholds. Without this information, it is premature to conclude that the system can absorb the proposed modifications without long-term degradation.</i></b></p> <p><b>Permanent Transformation of Aquatic Habitat</b></p> <p>The Harmony Instream Dam will permanently inundate and convert a flowing tributary into an impounded water body. This results in:</p> <ul style="list-style-type: none"> <li>• Irreversible loss of instream and riparian habitat,</li> <li>• Conversion from lotic to lentic conditions,</li> </ul> |  | <p>The application of the precautionary principle is acknowledged. The Environmental Impact Assessment (EIA) process is specifically intended to reduce uncertainty through detailed investigation and to provide the competent authority with sufficient information to assess whether the proposed development can proceed without unacceptable environmental impact. The final determination of acceptability will be made by the competent authority based on the outcomes of these assessments and compliance with applicable regulatory requirements.</p> <p>The concern regarding cumulative impacts within the Houdenbek catchment is acknowledged. It is noted that the Toeka Dam forms part of a separate application, within which its specific impacts will be assessed. For the Harmony Dam, cumulative impacts, including abstraction pressure and downstream effects, are recognised and are assessed as part of the Freshwater Specialist Study and broader EIA process. The Draft Scoping Report identifies this as a key issue, and detailed assessment at catchment level is undertaken in the EIR to inform the competent authority's decision.</p> <p>The permanent transformation of a tributary system and associated loss of instream habitat is acknowledged. The change from a flowing (lotic) to impounded (lentic)</p> |  |
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|  | <ul style="list-style-type: none"> <li>• Disruption of sediment transport processes,</li> <li>• Fragmentation of aquatic ecosystems.</li> </ul> <p>Mitigation measures such as ecological flow releases cannot fully replicate the complexity and variability of natural systems. The mitigation hierarchy requires avoidance of impacts where reasonably possible — <b>yet the Scoping Report does not demonstrate that lower-impact, off-channel alternatives have been exhaustively assessed.</b></p> <p><b>Sedimentation and Long-Term Geomorphological Effects</b><br/>Instream dams trap sediment that would naturally replenish downstream reaches. Over time, this may:</p> <ul style="list-style-type: none"> <li>• Reduce reservoir capacity;</li> <li>• Increase downstream erosion;</li> <li>• Alter channel stability and morphology;</li> <li>• Affect downstream ecological resilience.</li> </ul> <p>These long-term geomorphological implications are not yet adequately quantified but are particularly relevant within a declared mountain catchment.</p> <p><b>Need / Desirability</b><br/>While agricultural development and B-BBEE objectives are acknowledged, NEMA requires that development be:</p> <ul style="list-style-type: none"> <li>• Located in the right place;</li> <li>• The least environmentally damaging feasible option;</li> <li>• Ecologically sustainable in the long term.</li> </ul> <p>The key question is not whether irrigation is desirable, but whether instream dams within a sensitive mountain catchment are the appropriate mechanism to achieve it.</p> <p><b>The Draft Scoping Report does not yet demonstrate that off-channel storage or alternative water management approaches are infeasible or materially inferior.</b></p> |  | <p>system is recognised as an inherent impact of instream dams.</p> <p>Alternative dam positions were assessed during the Scoping Phase, and the preferred option was selected as the lowest impact feasible alternative. While mitigation measures such as ecological flow releases cannot fully replicate natural systems, they are included to reduce impacts in accordance with specialist recommendations.</p> <p>The concern regarding sediment trapping and downstream geomorphological impacts is acknowledged. These issues, including potential effects on channel stability and downstream processes, are considered in the freshwater and hydrological assessments.</p> <p>Mitigation measures, including appropriate dam design and operational controls, will be incorporated to manage sediment-related impacts. The long-term functioning of the system forms part of the overall environmental assessment to be considered by the competent authority.</p> <p>The concerns regarding need and desirability are acknowledged. The requirement to ensure that development is appropriately located, environmentally sustainable, and represents the least damaging feasible option is recognised in terms of NEMA.</p> <p>Alternative options, including dam layout alternatives, have been assessed during the Scoping Phase. The preferred option was selected as the lowest impact feasible alternative. The broader question of appropriate water supply mechanisms, including potential</p> |  |
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|  | <p><b>Precedent Risk</b><br/>Approval of instream impoundments within a proclaimed Mountain Catchment Area may establish a precedent that:</p> <ul style="list-style-type: none"> <li>• Gradually weakens the protective intent of catchment legislation;</li> <li>• Encourages incremental modification of headwater systems;</li> <li>• Undermines long-term water security.</li> </ul> <p><b><i>Regulatory consistency is essential to maintain the integrity of protected catchments.</i></b></p> <p>The proposed instream dams raise significant concerns regarding:</p> <ul style="list-style-type: none"> <li>• Alteration of downstream flow regimes;</li> <li>• Cumulative abstraction pressure;</li> <li>• Permanent habitat transformation;</li> <li>• Sedimentation and geomorphic impacts;</li> <li>• Biodiversity and heritage sensitivity;</li> <li>• Consistency with mountain catchment protection objectives.</li> </ul> <p><b><i>At the Scoping stage, material uncertainties remain regarding cumulative and long-term ecological impacts. In a proclaimed Mountain Catchment Area, such uncertainty must be approached cautiously.</i></b></p> <p>Accordingly, we submit that:</p> <ol style="list-style-type: none"> <li>1. The instream dam option should be reconsidered in favour of lower-impact alternatives.</li> <li>2. A robust catchment-level cumulative assessment is required.</li> <li>3. A precautionary approach should guide decision-making.</li> </ol> |  | <p>alternatives, is considered as part of the EIA process and will inform the competent authority's decision.</p> <p>The concern regarding precedent and the protection of Mountain Catchment Areas is acknowledged. The importance of maintaining regulatory consistency and safeguarding sensitive headwater systems is recognised.</p> <p>The current application is being assessed on its own merits, taking into account site-specific sensitivities, specialist findings, and applicable legislation. The decision regarding acceptability remains the responsibility of the competent authority.</p> <p>The concerns raised regarding downstream flow alteration, cumulative abstraction, habitat transformation, sedimentation, biodiversity and heritage sensitivity, and alignment with Mountain Catchment protection objectives are acknowledged.</p> <p>These issues have been identified in the Draft Scoping Report and are addressed through the specialist studies forming part of the EIA, including freshwater, biodiversity and heritage assessments.</p> <p>The concern regarding uncertainty at the Scoping stage is acknowledged. The Scoping Phase is intended to identify key issues and inform the scope of detailed specialist investigations.</p> <p>The EIA process provides the detailed assessment required to reduce uncertainty and to support the application of the precautionary principle in decision-making by the competent authority.</p> |  |
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|            | <p><b>For these reasons and all reasons presented previously, we cannot support environmental authorisation for the proposed instream dams in their current form.</b></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |         | <p>The objection to the proposed development is acknowledged and recorded. The request to reconsider instream dam options, undertake catchment-level cumulative assessment, and apply a precautionary approach is noted.</p> <p>These matters form part of the ongoing Environmental Impact Assessment process and will be considered by the competent authority in determining whether environmental authorisation should be granted.</p> |              |
| 2026/03/06 | <p><b>ACKNOWLEDGEMENT OF THE APPLICATION FORM AND DRAFT SCOPING REPORT (“SR”) SUBMITTED IN TERMS OF THE NATIONAL ENVIRONMENTAL MANAGEMENT ACT (ACT NO. 107 OF 1998) (“NEMA”) ENVIRONMENTAL IMPACT ASSESSMENT (“EIA”) REGULATIONS, 2014 (AS AMENDED) FOR THE CONSTRUCTION OF THE HARMONY INSTREAM DAM AND ASSOCIATED AGRICULTURAL AREA ON THE REMAINDER OF FARMS HOUDENBEK NO. 415 AND WINKELHAAK NO. 224, CERES</b></p> <ol style="list-style-type: none"> <li>1. The Application form and the Draft SR dated 19 February 2026 and February 2026, as received by the Directorate: Development Management Region 1 (hereinafter referred to as “this Directorate”) on 24 February 2026, refers.</li> <li>2. This letter serves as an acknowledgement of receipt of the abovementioned documents by this Directorate.</li> <li>3. Please note that since an application has been lodged with this Directorate, the pre-application file (DEA&amp;DP Reference: 16/3/3/6/7/2/B5/2/1476/23) has been closed for administrative purposes.</li> <li>4. Please note that this Directorate will consider the draft SR and issue a comment within the prescribed timeframe.</li> </ol> | WCDEADP | <p>Noted. The acknowledgement of the Application Form and Draft Scoping Report, including the dates of submission and receipt, is confirmed.</p> <p>Noted and acknowledged with thanks.</p> <p>Noted. The closure of the pre-application file for administrative purposes is acknowledged.</p> <p>Noted. The Applicant will await the Directorate’s comments within the prescribed timeframe.</p>                                          | EnviroAfrica |

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|            | <p>5. Kindly quote the abovementioned reference number in any future correspondence concerning the proposed development.</p> <p>6. This Directorate reserves the right to revise or withdraw its comments and request further information based on any information received.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |              | <p>Noted. The reference number will be used in all future correspondence relating to the application.</p> <p>Noted. The Directorate's right to revise or withdraw comments and request additional information is acknowledged.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |              |
| 2026/03/19 | <p>Hi</p> <p>Please find my comments attached. Please acknowledge receipt. I am Jean Buckley, representing the owners of Zeekoegat, a downstream property entirely reliant on the river as its sole water source. As such, we have a direct and material interest in any proposed development that may affect the quantity, timing, or reliability of flows within this system.</p> <p>While the project has obtained a Water Use Licence in terms of the National Water Act, 1998, this does not in itself justify environmental authorisation. Any approval must still meet the requirements of the National Environmental Management Act, 1998 (NEMA), and be consistent with the intent of the Mountain Catchment Areas Act, 1970, which exists specifically to protect sensitive upland systems. When considered against these legislative frameworks, as well as the broader principle of ecological sustainability, the proposed development raises a number of serious and, in some instances, fundamental concerns.</p> <p>A central issue is the location of the proposed Harmony Instream Dam within a proclaimed Mountain Catchment Area. These areas are specifically designated to protect hydrological functioning, safeguard water yield, maintain soil stability, and preserve ecological integrity in headwater systems. Any development within such areas must demonstrate, clearly and convincingly, that these functions will not be compromised. The Draft Scoping Report falls well short of meeting this standard. The permanent modification of</p> | Jean Buckley | <p>Receipt of your submission is acknowledged, and your registration as an Interested and Affected Party (I&amp;AP) is confirmed. Your interest as a downstream landowner reliant on the river system for water supply is noted and recognised as a key consideration in the assessment process.</p> <p>Your comment regarding the distinction between Water Use Licence approval and environmental authorisation is acknowledged. It is confirmed that the application is being assessed independently in terms of NEMA, and consideration is being given to the principles of ecological sustainability, as well as the intent of the Mountain Catchment Areas Act. These legislative frameworks form part of the decision-making context for the competent authority.</p> <p>The concern regarding the location of the proposed Harmony Instream Dam within a proclaimed Mountain Catchment Area is acknowledged. The sensitivity and ecological importance of such areas, including their role in maintaining hydrological function and ecological integrity, are recognised.</p> <p>Alternative dam layouts were assessed, and the preferred option was selected as the lowest impact feasible alternative within site constraints. The potential</p> | EnviroAfrica |

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|  | <p>a natural tributary in such a setting is inherently high risk, yet the level of assurance required to justify such an intervention is absent. There are also significant and unresolved concerns regarding downstream flow impacts. The Water Use Licence authorises substantial abstraction volumes from both the Houdenbek River and an unnamed tributary. The repeated assurance that abstraction will occur only during “confirmed winter high flow (flood) events,” and not during dry or baseflow periods, is presented as a safeguard. However, this claim does not withstand scrutiny.</p> <p>Although a flow threshold is referenced, there is no practical or credible explanation of how a “flood event” will be identified, verified, and authorised in real time. In this catchment, high-flow events are typically short-lived—often occurring over a matter of hours rather than a prolonged period. This raises a fundamental and unanswered question: how, in practice, is abstraction approval to be obtained within such a narrow window? Who specifically is responsible for confirming that the threshold has been reached, and on what data is that determination based? Is this confirmation undertaken by an independent authority, or left to the applicant? What monitoring infrastructure exists, and is it subject to independent oversight and audit?</p> |  | <p>impacts associated with the modification of a tributary system are being assessed through the freshwater and biodiversity specialist studies, which inform the overall impact assessment.</p> <p>Concerns regarding downstream flow impacts and authorised abstraction volumes are acknowledged. It is confirmed that abstraction is regulated through the Water Use Licence, which restricts abstraction to surplus winter high-flow conditions and prohibits abstraction during low-flow periods. The potential effects on downstream flow regimes, including seasonal variability and ecological functioning, have been identified as key issues and are being assessed through the freshwater specialist input as part of the EIA process.</p> <p>The concerns regarding the practical implementation of high-flow abstraction triggers are acknowledged. Abstraction thresholds, monitoring requirements, and compliance mechanisms are governed by the Water Use Licence conditions issued by the Department of Water and Sanitation. These typically include the use of calibrated flow monitoring infrastructure, defined trigger levels, and reporting requirements to ensure that abstraction only occurs under compliant conditions. Oversight and enforcement remain the responsibility of the relevant regulatory authority. The operational feasibility and monitoring of abstraction during high-flow events are recognised as important considerations and are being incorporated into the assessment of the project.</p> |  |
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|  | <p>As a downstream landowner, these are not abstract concerns. They go directly to the reliability and enforceability of what is presented as a key safeguard. If the confirmation process is not clearly defined, independently verified, and transparently administered, then the restriction is effectively unenforceable. The absence of detail strongly suggests that this control exists more as a statement of intent than as a practical mechanism. Furthermore, given the short duration of flood events in this area, it is highly questionable whether any meaningful external oversight could occur in time to regulate abstraction appropriately. In reality, this creates a situation where compliance is largely dependent on self-regulation by the applicant, with little opportunity for real-time verification. That is not an adequate or acceptable basis on which to rely for the protection of downstream users or ecological processes.</p> <p>Even if such a mechanism were properly defined, it would not eliminate the risk of altering natural flow regimes. Abstraction during high-flow periods can still dampen seasonal variability, affect sediment transport, and reduce flows during transitional periods. The Draft Scoping Report itself identifies downstream flow alteration as a key issue requiring further investigation, which underscores the extent of the uncertainty. Under NEMA's precautionary principle, such uncertainty—particularly within a sensitive headwater system—should weigh against approval, not be deferred or minimised.</p> |  | <p>The concern regarding the enforceability and transparency of abstraction controls is acknowledged. Abstraction is regulated through the Water Use Licence (WUL), which includes defined trigger thresholds, monitoring requirements, and compliance obligations administered by the Department of Water and Sanitation (DWS).</p> <p>These controls are not based solely on self-regulation but require measurable flow conditions, supported by monitoring infrastructure and reporting. The need for clear, auditable and independently verifiable monitoring is recognised, and the operational requirements in this regard form part of the regulatory framework governing the activity.</p> <p>The concern regarding the short duration of high-flow events and the practicality of real-time oversight is acknowledged. While such events may be brief, abstraction is required to comply strictly with WUL conditions, including cessation of abstraction once flow thresholds are no longer met.</p> <p>The role of regulatory oversight by DWS, together with monitoring and reporting requirements, is noted. These aspects are recognised as critical to ensuring compliance and are considered in the assessment of the project's operational feasibility.</p> <p>It is acknowledged that abstraction during high-flow periods may still influence natural flow variability and associated ecological processes. The Draft Scoping Report identifies downstream flow alteration as a key issue requiring further investigation.</p> <p>This uncertainty is being addressed through the freshwater specialist assessment as part of the EIA. The</p> |  |
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## COMMENTS AND RESPONSE REPORT – HARMONY INSTREAM DAM

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|  | <p>The proposal must also be considered in the context of cumulative impacts across the broader Houdenbek catchment. When viewed collectively, the proposed infrastructure—including the Toeka Dam, the instream dam, and nearly one million cubic metres per annum of authorised abstraction—together with existing upstream and downstream users, represents a substantial and potentially unsustainable increase in pressure on the system. While cumulative abstraction is acknowledged in the Draft Scoping Report, there is no meaningful catchment-level modelling, no defined ecological thresholds, and no demonstration of the system's capacity to absorb these impacts without long-term degradation. In the absence of such analysis, any conclusion that impacts are acceptable would be premature.</p> <p>The permanent transformation of aquatic habitat is another unavoidable consequence of the instream dam. The conversion of a flowing tributary into an impounded system will result in the irreversible loss of instream and riparian habitat, a shift from lotic to lentic conditions, disruption of sediment processes, and fragmentation of aquatic ecosystems. These impacts cannot be meaningfully mitigated. Measures such as environmental flow releases are, at best, partial and artificial substitutes that do not replicate the complexity of natural systems. The mitigation hierarchy is clear that impacts should be avoided where reasonably possible, yet there is no convincing evidence that lower-impact alternatives, such as off-channel storage, have been rigorously assessed and eliminated.</p> |  | <p>application of the precautionary principle is recognised, and the competent authority will consider the level of risk and uncertainty in determining the acceptability of the proposed development.</p> <p>The concern regarding cumulative impacts within the Houdenbek catchment is acknowledged. It is noted that the combined effect of proposed and existing infrastructure, including authorised abstraction volumes, may contribute to increased pressure on the system. Cumulative impacts have been identified as a key issue in the Draft Scoping Report and are being assessed through the freshwater specialist input. This includes consideration of catchment-level functioning, downstream implications, and the system's capacity to accommodate additional development. It is further noted that the Toeka Dam forms part of a separate application process, and cumulative considerations will be assessed within the appropriate regulatory context.</p> <p>The concern regarding the permanent transformation of aquatic habitat and the shift from lotic to lentic conditions is acknowledged. It is recognised that instream impoundments result in irreversible changes to aquatic and riparian systems. Alternative dam layout options were assessed during the Scoping Phase, and the preferred option was identified as the lowest impact feasible alternative within the site constraints. The extent of habitat transformation and associated ecological impacts are being assessed through the freshwater and biodiversity specialist studies to inform the overall impact assessment.</p> |  |
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## COMMENTS AND RESPONSE REPORT – HARMONY INSTREAM DAM

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|  | <p>Sedimentation and longer-term geomorphological effects further compound these concerns. Instream dams trap sediment that would otherwise replenish downstream environments. Over time, this reduces storage capacity while increasing the likelihood of downstream erosion and channel instability. These processes are particularly significant in mountain catchments, where geomorphological balance is closely linked to ecological health. Despite this, the long-term implications are not adequately quantified or addressed.</p> <p>The justification of need and desirability is similarly weak. The repeated assertion that secure water availability is fundamental to agricultural viability in the Koue Bokkeveld, and that the project will enhance productivity, employment, and economic resilience, is presented without any substantive supporting evidence. There is no quantification of expected productivity gains, no breakdown of anticipated employment, and no clarity on the nature, number, or duration of jobs to be created. Critically, there is also no indication of how many of these positions would be filled by local residents. This omission is particularly relevant in a context where farm labour in the area is frequently sourced from outside the local community, largely workers from Lesotho. Without a transparent and quantified account of socio-economic benefits, these claims amount to little more than unsubstantiated assertions and cannot meaningfully be weighed against the environmental costs.</p> <p>There is also a broader concern regarding precedent. Approving instream impoundments within a proclaimed Mountain Catchment Area risks incrementally eroding the protective intent of the legislation governing these areas. It creates a pathway for further similar developments and contributes to the gradual degradation of headwater systems, with implications for long-term water security. Regulatory consistency is essential if these protected areas are to retain their intended function.</p> |  | <p>The concern regarding sediment trapping and downstream geomorphological effects is acknowledged. The role of sediment transport in maintaining downstream channel stability and ecological function is recognised, particularly within mountain catchment systems.</p> <p>These aspects have been identified as key issues and are being assessed as part of the freshwater specialist input, including consideration of potential long-term impacts on channel morphology and downstream processes.</p> <p>The concern regarding the substantiation of need and desirability is acknowledged. The project aims to improve water security to support agricultural activities, which is a key driver in the region.</p> <p>Socio-economic benefits, including employment creation and economic resilience, are being considered as part of the impact assessment. Further detail regarding the scale and nature of anticipated benefits will be included in the EIA phase to support a balanced assessment against environmental impacts.</p> <p>The concern regarding precedent and the protection of Mountain Catchment Areas is acknowledged. The importance of maintaining the integrity and intended function of these protected areas is recognised.</p> <p>The application is being assessed on a case-by-case basis, taking into account site-specific sensitivities, specialist findings, and applicable legislation. The competent authority will consider these factors in</p> |  |
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## COMMENTS AND RESPONSE REPORT – HARMONY INSTREAM DAM

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|  | <p>Taken together, the proposal raises serious concerns relating to downstream flow alteration, the absence of credible and enforceable abstraction controls, cumulative abstraction pressure, permanent habitat transformation, sedimentation and geomorphological impacts, and a failure to substantiate claimed socio-economic benefits. At the current Scoping stage, there remain material uncertainties regarding both cumulative and long-term ecological consequences. In a system of this sensitivity, such uncertainty should be a decisive factor.</p> <p>For these reasons, I cannot support environmental authorisation of the proposed instream dams in their current form. At a minimum, the proposal would require a fundamental reconsideration in favour of demonstrably lower-impact alternatives, supported by rigorous catchment-level analysis, clearly defined and enforceable operational controls, and a precautionary approach to decision-making. As it stands, it does not meet that standard.</p> <p><b>In its current form, the proposal is not only inadequately justified, but fundamentally fails to demonstrate that it can proceed without unacceptable and potentially irreversible harm to downstream users and the catchment as a whole.</b></p> |  | <p>determining the acceptability of the proposed development.</p> <p>The concerns raised regarding downstream flow alteration, abstraction controls, cumulative impacts, habitat transformation, sedimentation, and socio-economic justification are acknowledged. These issues have been identified in the Draft Scoping Report and form part of the specialist investigations currently being undertaken. The Scoping Phase serves to identify these key issues, which are then assessed in detail during the EIA phase. The level of uncertainty and associated risks will be considered by the competent authority in applying the precautionary principle and determining whether the proposed development is acceptable.</p> <p>Your objection to the proposed development in its current form is acknowledged and formally recorded. The request for reconsideration of lower-impact alternatives, strengthened catchment-level assessment, clearly defined operational controls, and application of the precautionary principle is noted. These aspects form part of the ongoing Environmental Impact Assessment process and will be considered by the competent authority in evaluating the acceptability of the proposed development.</p> <p>The concern that the proposal does not sufficiently demonstrate avoidance of unacceptable or irreversible impacts is acknowledged. The issues raised regarding potential downstream effects and overall catchment integrity are recognised as key considerations.</p> |  |
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## COMMENTS AND RESPONSE REPORT – HARMONY INSTREAM DAM

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|            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                | These matters are being assessed through the specialist studies and impact assessment process, and will be taken into account by the competent authority in making an informed decision on the application.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |
| 2026/03/23 | <p>Dear Bianca</p> <p>Please find comment on the draft scoping reports attached.<br/>Please acknowledge receipt.</p> <p>I am the owner of the property immediately adjacent to the proposed Harmony Instream Dam site, and I have a direct and material interest in the river, which is the sole source of water for downstream landholders.</p> <p>The Draft Scoping Report asserts that water will only be abstracted during “confirmed winter high flow (flood) events” and not during low-flow periods. In this catchment, however, such events are extremely brief—often lasting only a few hours. There is no explanation of how a flood event will be reliably identified in real time, who will confirm it, or whether this process will be independently verified. Practical experience in this catchment strongly suggests that compliance under these conditions is highly unlikely.</p> <p>No information is provided regarding the size or capacity of the pumps required to remove the authorised volumes. Given the very short duration of high-flow events, the scale of pumping needed makes adherence to the proposed restrictions virtually impossible and raises the distinct possibility that water will be abstracted outside the stated limits.</p> | Pieter G Colyn | <p>Receipt of your submission is acknowledged. Your status as an adjacent landowner and downstream water user is noted, and your interest in the river system as a primary water source is recognised as an important consideration in the assessment process.</p> <p>The concern regarding the identification and verification of high-flow (flood) events is acknowledged. Abstraction is regulated through the Water Use Licence (WUL), which includes defined trigger thresholds and monitoring requirements.</p> <p>These controls are based on measurable flow conditions and are subject to regulatory oversight by the Department of Water and Sanitation. The need for clear and verifiable monitoring mechanisms is recognised and forms part of the operational framework governing abstraction.</p> <p>The concern regarding pump capacity and the feasibility of abstracting authorised volumes within short-duration high-flow events is acknowledged. Detailed design specifications, including pump capacity and operational parameters, form part of the engineering design phase and are subject to compliance with WUL conditions. Operational feasibility and adherence to abstraction limits are recognised as important considerations in the assessment of the proposed development.</p> |  |

## COMMENTS AND RESPONSE REPORT – HARMONY INSTREAM DAM

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|           | <p>These concerns are reinforced by recent unauthorised activity on my property, including the clearing of vegetation and construction of a road, documented by the Department. While I make no direct allegation regarding the current proposal, this history demonstrates the need for strict, independently monitored safeguards.</p> <p>Any approval of abstraction that does not include enforceable, independently verified flow determination, clear pump specifications, and transparent compliance mechanisms would create an unacceptable risk of continuous unauthorised abstraction, with serious consequences for downstream landowners and the river ecosystem.</p> <p><b>In the absence of such safeguards, authorising the proposed abstraction would be a demonstrably unsafe and indefensible decision.</b></p> |                 | <p>The concerns raised regarding previous unauthorised activities are acknowledged. While these matters are noted, they are separate from the current application process, which is subject to regulatory requirements, monitoring, and compliance obligations under applicable legislation.</p> <p>The need for enforceable, independently verifiable monitoring and compliance mechanisms is acknowledged. Abstraction is governed by WUL conditions, which include monitoring, reporting, and regulatory oversight requirements. These measures are intended to ensure compliance and protect downstream users and ecological processes, and their adequacy forms part of the regulatory framework applicable to the development.</p> <p>The concern that the proposed abstraction may pose a risk to downstream users and the river system in the absence of adequate safeguards is acknowledged. These concerns are recorded and will be considered as part of the Environmental Impact Assessment process, with input from relevant specialists and authorities, in determining the acceptability of the proposed development.</p> |              |
| Mon 03/30 | <p>Dear Sir/Madam,</p> <p>I hereby submit a formal objection to the proposed development of the Harmony instream dam, pipeline, and associated agricultural area on the remainder of Farm Hodenbek No. 415 (Reference: 16/3/3/6/7/2/B5/2/1476/23) as part of the ongoing NEMA public participation process.</p> <p>While the Botanical Assessment notes that the construction of the Harmony Dam (Option 3) would result in a <i>medium negative impact</i></p>                                                                                                                                                                                                                                                                                                                                                                   | Janine Greyling | <p>Receipt of your submission and formal objection is acknowledged. Your comments will be recorded and included in the Comments and Response Report forming part of the Environmental Impact Assessment process.</p> <p>The concern regarding the need to assess the proposal within a broader ecological and catchment context is</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | EnviroAfrica |

## COMMENTS AND RESPONSE REPORT – HARMONY INSTREAM DAM

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|  | <p><i>at a local scale</i> and that the dam itself is not located within a formally threatened vegetation type, it is critical that this proposal be assessed within its broader ecological and catchment context, rather than in isolation.</p> <p>My primary concern relates to the proposed Harmony Agricultural Area, where the assessment identifies the loss of Kouebokkeveld Alluvium Fynbos as having a high to very high negative impact. The study clearly confirms that this is a distinct, ecologically sensitive vegetation type, and that development within this area would unavoidably necessitate a Conservation Offset. The report explicitly recommends application of the precautionary principle, highlighting the risk of irreversible biodiversity loss, particularly to sensitive and endemic species such as <i>Aspalathus jordinii</i> and other flora unique to this system.</p> <p>Furthermore, this site forms part of a protected mountain catchment area, which plays a vital role in maintaining downstream ecological functioning and water security. The introduction of intensive agricultural land use, associated infrastructure, and permanent transformation raises serious concerns regarding the long-term ecological integrity, resilience, and cumulative impacts on the broader landscape. In this context, it is necessary to question whether development of this nature is appropriate or desirable in a sensitive catchment system of this importance.</p> <p>For these reasons, I strongly oppose the proposed development—particularly the agricultural component—on the following grounds:</p> <ul style="list-style-type: none"> <li>• The high ecological sensitivity and irreplaceability of the affected Kouebokkeveld Alluvium Fynbos;</li> <li>• The likelihood of triggering a Conservation Offset, which by definition indicates unacceptable habitat loss;</li> </ul> |  | <p>acknowledged. The application is being assessed at both site-specific and landscape scales, including consideration of cumulative and catchment-level impacts as part of the EIA process.</p> <p>The concern regarding impacts on Kouebokkeveld Alluvium Fynbos is acknowledged. The botanical assessment confirms that the proposed agricultural area would result in a high to very high negative impact on this Critically Endangered vegetation type, with associated biodiversity implications.</p> <p>The potential requirement for a biodiversity offset is recognised, and this is being considered in line with applicable guidelines. The significance of the impact and associated risks are being taken into account in the assessment process.</p> <p>The concern regarding the location within a Mountain Catchment Area and the broader question of desirability is acknowledged. The ecological importance of these areas, including their role in maintaining hydrological functioning and ecosystem resilience, is recognised.</p> <p>These factors are being considered as part of the overall assessment of environmental acceptability and sustainability.</p> <p>The grounds for objection, including ecological sensitivity, potential biodiversity offsets, cumulative impacts, and the application of the precautionary principle, are acknowledged.</p> <p>These issues have been identified in the Draft Scoping Report and are being assessed through the specialist</p> |  |
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## COMMENTS AND RESPONSE REPORT – HARMONY INSTREAM DAM

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|           | <ul style="list-style-type: none"> <li>The insufficient consideration of cumulative, landscape-scale, and catchment-level impacts;</li> <li>The clear application of the precautionary principle, which advises against proceeding where biodiversity risks are high and long-term consequences are uncertain or irreversible.</li> </ul> <p>I respectfully request that this objection be formally recorded and given due consideration in the Environmental Authorisation decision-making process. The protection of these unique vegetation types and ecological systems is essential to safeguarding South Africa's biodiversity, ecosystem services, and natural heritage for future generations.</p> <p>I respectfully request that this objection be formally acknowledged and fully considered as part of the NEMA-mandated public participation process.</p> <p>Find link to ongoing petition with public support</p> <p><a href="#">Save the Riet River and Doring River in Ceres - Petitions.com</a></p> |         | <p>studies and impact assessment process, forming part of the EIA.</p> <p>Your request that the objection be formally recorded and considered in the Environmental Authorisation process is acknowledged. All comments received form part of the public participation record and will be submitted to the competent authority for consideration.</p> <p>The link to the petition titled "Save the Riet River and Doring River in Ceres" is acknowledged. This submission will be noted as part of the public participation process.</p> |              |
| Wed 04/01 | <p><b>COMMENT ON THE DRAFT SCOPING REPORT ("SR") IN TERMS OF THE NATIONAL ENVIRONMENTAL MANAGEMENT ACT (ACT NO. 107 OF 1998) ("NEMA") ENVIRONMENTAL IMPACT ASSESSMENT REGULATIONS, 2014 (AS AMENDED) ("EIA") FOR THE PROPOSED CONSTRUCTION OF THE HARMONY INSTREAM DAM AND ASSOCIATED AGRICULTURAL AREA ON THE REMAINDER OF FARMS HOUDENBEK NO. 415 AND WINKELHAAK NO. 224, CERES</b></p> <ol style="list-style-type: none"> <li>The draft SR dated February 2026, as received by the Directorate: Development Management Region 1 (hereinafter referred to as "this Directorate") on 24 February 2026, refers.</li> <li>Following the review of the information submitted to this Department, the following is noted:</li> </ol>                                                                                                                                                                                                                                                                                   | WCDEADP | <p>Noted. The Draft Scoping Report dated February 2026 and received on 24 February 2026 is acknowledged.</p> <p>Noted. The Department's review of the submitted information is acknowledged.</p>                                                                                                                                                                                                                                                                                                                                        | EnviroAfrica |

## COMMENTS AND RESPONSE REPORT – HARMONY INSTREAM DAM

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|  | <p>2.1 The proposal entails the establishment of approximately 25ha of agricultural land and the construction of an instream dam in an unnamed tributary of the Houdenbek River on the Remainder of Farm Houdenbek No. 415. The dam specifications are:</p> <p>2.1.1 Dam wall length: 280m</p> <p>2.1.2 Dam wall height: 12,8m</p> <p>2.1.3 Dam capacity: 250 000m<sup>3</sup></p> <p>2.1.4 Dam surface area: 5,4ha</p> <p>3 The Department has the following comments that must be addressed and included in the in-process SR:</p> <p>3.1 Activity description</p> <p>3.1.1 Clarity must be provided whether pipelines will be required as part of the development as page 10 of the SR indicates that water will be conveyed from the dam to the existing pipeline network. However, pages 10 and 11 refers to the development of new pipelines.</p> <p>3.1.2 Should pipelines be required, the diameter, length, location and start, middle and end co-ordinates must be provided.</p> <p>3.1.3 Furthermore, details regarding the source of the infill material for the dam must be included in the activity description.</p> <p>3.2 Since the development will be located within a Mountain Catchment Area ("MCA"), confirmation is required as who is the management authority, since this will determine the relevant competent authority for this application.</p> |  | <p>Noted. The project description and dam specifications as summarised are confirmed as correct and are reflected in the Draft Scoping Report.</p> <p>Noted. The discrepancy regarding pipeline infrastructure is acknowledged. The Scoping Report will be amended to clearly distinguish between the use of existing pipeline infrastructure and any proposed new pipeline components associated with the development.</p> <p>Noted. Should new pipeline infrastructure be required, details including diameter, length, alignment, and start, middle and end coordinates will be included in the amended Scoping Report.</p> <p>Noted. The source of infill material for the dam wall construction will be specified in the activity description, including whether material will be sourced on-site or from permitted external borrow areas.</p> <p>The development is located within the Koue Bokkeveld Mountain Catchment Area. Water use and abstraction associated with the development are regulated through the Koue Bokkeveld Water User Association, which</p> |  |
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|  | <p>operates under the authority of the Department of Water and Sanitation (DWS).</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |
|  | <p><b>3.3 Alternatives</b></p> <p>3.3.1 The evolution of dam alternatives must be included through the application process, even though some alternatives are screened out because it is not feasible. This will allow the competent authority to evaluate the steps taken to get to the preferred alternative.</p> <p>3.3.2 It is noted the CapeNature objects to the proposed agricultural area as the residual impacts will be of very high negative significance. The dam location is also not supported by CapeNature.</p> <p>3.3.3 You are advised that alternatives must be investigated to address the concerns of CapeNature.</p> <p>3.3.4 The SR must clearly show how the mitigation hierarchy was considered and implemented in the identification of reasonable and feasible alternatives.</p> <p><b>3.4 Offsets</b></p> <p>3.4.1.1 It is noted that an offset is being considered for the proposed development. However, no site has been secured.</p> <p>3.4.1.2 Please note should an offset be required, an offset study must be conducted by an appropriate specialist. Comment must be obtained from CapeNature regarding the offset study.</p> | <p>Noted. The Scoping Report will be amended to include a clear description of the evolution of dam alternatives, including those screened out, to demonstrate the process followed in identifying the preferred alternative.</p> <p>Noted. CapeNature's objection to both the proposed agricultural area and dam location is acknowledged and has been incorporated into the assessment process.</p> <p>Noted. An offset may be required based on residual impacts, to be confirmed during EIA.</p> <p>The Scoping Report will be updated to clearly demonstrate how the mitigation hierarchy (avoidance, minimisation, rehabilitation, and offset) has been applied in the identification and assessment of alternatives.</p> <p>Noted. The current status of the offset is acknowledged.</p> <p>Noted. Should an offset be required, a detailed offset study will be undertaken by a suitably qualified specialist, and comment will be obtained from CapeNature.</p> |  |

## COMMENTS AND RESPONSE REPORT – HARMONY INSTREAM DAM

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|  | <p>3.4.1.3 Further note that in order for this Directorate to further consider the application, an offset site must be secured, and an agreement must be in place for the management of the offset site.</p> <p>3.4.1.4 If the above information is not included in the final EIA report, this may prejudice the outcome of this application.</p> <p>3.5 A more detailed description of the total abstraction versus storage capacity must be provided.</p> <p>3.6 A Geo-referenced map of dam footprint must be provided.</p> <p>3.7 Plan of Study ("POS")\</p> <p>3.7.1 The POS does not meet the requirements of Appendix 2(1)(h)(i) and (ii).</p> <p>3.7.2 According to Appendix 2(1)(h) the POS must include a description of the alternatives to be considered and assessed within the preferred site. However, this information has not been included in the POS.</p> <p>3.7.3 The POS must be amended to meet the requirements of Appendix 2(1)(h).</p> <p>4 Regulatory requirements:</p> <p>4.1 Proof of the notifications and the copies of the notification letters sent to registered I&amp;APs for the comment on the draft SR must be included in the final SR.</p> <p>4.2 All representations and comments received during the commenting period for the must be in process final SR and any responses by the EAP to those representations and</p> |  | <p>Noted. The requirement to secure an offset site and formalise a management agreement is acknowledged and will be addressed during the EIA phase.</p> <p>Noted. The importance of including complete offset information in the Final EIA Report is acknowledged.</p> <p>Noted. A more detailed description of the relationship between authorised abstraction volumes and dam storage capacity will be included in the amended Scoping Report.</p> <p>Noted. A geo-referenced map indicating the dam footprint will be included in the Final Scoping Report.<br/>Noted. The deficiency in the current Plan of Study is acknowledged.</p> <p>Noted. The Plan of Study will be amended to include a description of alternatives to be considered within the preferred site, in accordance with Appendix 2(1)(h).</p> <p>Noted. Proof of notification, including copies of notification letters issued to registered I&amp;APs, will be included in the Final Scoping Report.</p> |  |
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|  | <p>comments must be tabulated in a comments and response report.</p> <p>4.3 The minutes of any meetings held by the EAP with I&amp;APs and other role players which record the views of the participants.</p> <p>4.4 Please be advised that a digitally signed and dated applicant declaration is required to be submitted with the final SR to this Department for decision-making. It is important to note that by signing this declaration, the applicant is confirming that they are aware and have taken cognisance of the contents of the report. Furthermore, through signing this declaration, the applicant is making a commitment that they are both willing and able to implement the necessary mitigation, management and monitoring measures recommended within the report with respect to this application.</p> <p>4.5 In addition to the above, please ensure that an updated digitally signed and dated EAP and specialist declarations are also submitted with the final SR for decision-making.</p> <p>5 You are reminded that the SR must contain all the information outlined in Appendix 2 of Environmental Impact Assessment (“EIA”) Regulations 2014 (as amended).</p> <p>6 Kindly quote the abovementioned reference number in any future correspondence concerning the proposed development.</p> <p>7 Please note that the activity may not commence prior to an environmental authorisation being granted by the Department.</p> |  | <p>Noted. All comments received during the public participation process will be included in the Final Scoping Report, and a comprehensive Comments and Response Report will be compiled and appended, reflecting all representations and corresponding responses.</p> <p>Noted. Minutes of meetings held with I&amp;APs and relevant stakeholders, where applicable, will be included in the Final Scoping Report.</p> <p>Noted. A digitally signed and dated Applicant Declaration will be submitted with the Final Scoping Report, confirming the Applicant’s awareness of the contents of the report and commitment to implement all recommended mitigation, management, and monitoring measures.</p> <p>Noted. Updated digitally signed and dated declarations from the Environmental Assessment Practitioner (EAP) and all relevant specialists will be included in the Final Scoping Report.</p> <p>Noted. The Final Scoping Report will be reviewed and updated, where necessary, to ensure full compliance with the requirements of Appendix 2 of the EIA Regulations, 2014 (as amended).</p> <p>Noted. The reference number will be quoted in all future correspondence relating to this application.</p> |  |
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## COMMENTS AND RESPONSE REPORT – HARMONY INSTREAM DAM

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|            | 8 This Department reserves the right to revise or withdraw its comments and request further information based on any information received.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |            | <p>Noted. It is acknowledged that the listed activities may not commence prior to the granting of Environmental Authorisation.</p> <p>Noted. The Department's right to revise or withdraw comments and request additional information is acknowledged.</p>                                                                                                                                                                                                                                                                                                                                                                         |              |
| 04/08/2026 | <p>Dear Ms Gilfillan</p> <p><b>RE: The Proposed Development of the Harmony Instream Dam and associated Agricultural area on the Remainder of Farms Houdenbek No. 415 and Winkelhaak No. 224 near Die Dorp Op Die Berg, Ceres, Western Cape – Draft Scoping Report. DEA&amp;DP reference: 16/3/3/6/7/2/B5/2/1476/23</b></p> <p>CapeNature would like to thank you for the opportunity to comment on the Draft Scoping Report. Please note that our comments pertain primarily to impacts on biodiversity and not to the overall desirability of the project.</p> <p><b><u>General:</u></b></p> <p>1. There was a previous application for the construction of both Harmony and Toeka Dams on the Remainder of Farm Houdenbek No 415, Ceres, (DEA&amp;DP reference number: 16/3/3/6/7/1/B5/2/1367/17), which CapeNature commented on 21 July 2017, 31 October 2018, 22 August 2019 and 03 July 2025 respectively. These comments still have reference.</p> <p>2. According to the National Vegetation Map of South Africa (2018), there are two vegetation types mapped within the footprints of the proposed dam and agricultural area: Winterhoek Sandstone Fynbos, which is currently not listed as a threatened ecosystem, and Kouebokkeveld Alluvium Fynbos, listed as a Critically</p> | CapeNature | <p>The previous application and associated CapeNature comments are acknowledged. These comments have been considered in the preparation of the current application, and where applicable, have informed the refinement of the proposed layout, including the identification of the preferred dam alternative and the reassessment of environmental sensitivities.</p> <p>The presence of both Winterhoek Sandstone Fynbos and Critically Endangered Kouebokkeveld Alluvium Fynbos is acknowledged. The latter is confirmed as the dominant vegetation type within the proposed agricultural area. The Botanical Assessment has</p> | EnviroAfrica |

## COMMENTS AND RESPONSE REPORT – HARMONY INSTREAM DAM

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|  | <p>Endangered ecosystem which is the dominant vegetation type in the proposed agricultural area. Although patches have been previously disturbed, larger areas of intact natural (undisturbed) vegetation remains.</p> <p><b><u>The proposed Harmony Dam:</u></b></p> <p>3. The Draft Scoping Report (DSR) indicates that the proposed development entails the construction of an instream dam, with an estimated storage capacity of approximately 250 000 m<sup>3</sup>, a maximum dam wall height of approximately 12.8 m, and a dam wall crest length of approximately 280 m. The primary purpose of the dam is to store and supply water for irrigation, supporting an associated agricultural area of approximately 25 hectares. The estimated inundation area at full supply level will cover approximately 5.4 ha on the lower slopes of the Houdenbeks Mountains. The dam will be supplied predominantly by runoff from the surrounding catchment during periods of winter surplus flow. During drier periods, water supply may be supplemented via pumping from the Toeka Dam located on Farm No. 414, conveyed through a pipeline of approximately 1,200 m in length. Please can you clarify or indicate where this pipeline will be located – seeing that it is not shown on the Locality Map or any other maps. Additionally, will the pipeline be located above or below ground?</p> <p>Furthermore, Section 4.3: Layout Alternatives (Page 21) refers to the Site Development Plans (Appendix 2), but there is no Site Development Plan provided within the available documentation. This Section also refers to the three different proposed Dam options, however only one Dam option or Layout is provided in the Locality Map and other maps. How was Dam Option 3 selected to be the preferred layout?</p> <p>4. As stated previously, the 2017 and updated 2023 Western Cape Biodiversity Spatial Plan (BSP) indicates that the proposed dam area is partially situated within a Terrestrial Critical Biodiversity</p> |  | <p>identified this as a key constraint, and the associated impacts have been assessed as high to very high, with the implications of this loss being considered as part of the overall environmental impact assessment.</p> <p>The proposed pipeline connecting the Toeka Dam to the Harmony Dam will be approximately 1,200 m in length and is anticipated to follow existing disturbed corridors and/or farm tracks where possible to minimise environmental impact. The pipeline is proposed to be installed below ground, except where site-specific constraints require otherwise. The final alignment will be confirmed and illustrated in the Draft Environmental Impact Report (EIR).</p> <p>With regard to the Site Development Plan (SDP), this will be included in the Draft EIR to clearly reflect the preferred layout and associated infrastructure.</p> <p>Dam layout alternatives (Options 1–4) were assessed during the Scoping Phase. Options 1 and 2 were located further upstream and would have resulted in greater impacts on intact vegetation and proximity to heritage resources, while Option 4 presented engineering and floodline constraints. Option 3 was identified as the preferred alternative as it represents the best overall environmental and technical compromise, with reduced ecological and heritage impacts.</p> <p>The mapping of the site within CBA, ESA and the Kouebokkeveld Mountain Catchment Area (MCA) is acknowledged. The ecological importance of these</p> |  |
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## COMMENTS AND RESPONSE REPORT – HARMONY INSTREAM DAM

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|  | <p>Area (CBA), as well as within Ecological Support Areas (ESA: Aquatic). ESAs play an important role in supporting the functioning of Protected Areas (PA) or CBAs and are often vital for delivering ecosystem services. The ESA is mapped due to the presence of a watercourse, for water source protection, upland-lowland interface and for groundwater recharge and it is essential that these areas are managed or restored to minimize the impact on ecological processes and ecological infrastructure functioning, especially soil and water-related services. Furthermore, the majority of the proposed dam area is situated within the Kouebokkeveld Mountain Catchment Area (MCA) Protected Area. MCAs refers to a defined region in a mountain range that collects and channels rainwater, snowmelt, and other precipitation into rivers and streams, ultimately contributing to a larger water system. These areas are crucial for water supply and play a vital role in ecological processes and biodiversity, especially in mountain regions. MCAs are important and significant in terms of Water Sources (MCAs are significant sources of freshwater for urban areas, agriculture, and industry in the Western Cape), Protection (MCAs are protected to ensure supply of good quality and quantity of water, as well as to protect biodiversity that relies on higher lying area for refugia) and MCAs are therefore of high ecological importance. The MCA and larger area are considered an important area for runoff and acts as a Primary catchment area and Strategic Water Source Area (SWSA) for Surface Water (Groot Winterhoek) and Groundwater (Northwestern Cape Ranges).</p> <p>5. CapeNature does not support activities within MCAs which compromise the movement of surface water and/or recharge of groundwater. Instream dams are not supported within MCAs. No activities which result in loss of habitat or alteration of water flow or quality should be permitted in MCAs. Although Mountain Catchment Areas (MCAs) are proclaimed under specific legislation (the Mountain Catchment Areas Act, No. 63 of 1970), they are also considered part of the broader protected area estate. Therefore, any loss of intact habitat in these zones is of</p> |  | <p>areas, particularly in terms of water provision, groundwater recharge, and biodiversity support, is recognised. These sensitivities have been incorporated into the impact assessment and have informed the identification of constraints, mitigation measures, and the evaluation of the preferred layout.</p> <p>CapeNature's objection to the proposed Harmony Dam within the Kouebokkeveld Mountain Catchment Area is acknowledged. The concerns regarding habitat loss, alteration of flow regimes, and cumulative impacts on the Houdenberg–Riet system are recognised.</p> <p>The proposal is subject to a valid Water Use Licence (WUL) issued by the Department of Water and Sanitation, which regulates abstraction volumes, timing,</p> |  |
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## COMMENTS AND RESPONSE REPORT – HARMONY INSTREAM DAM

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|  | <p>significant concern. Additionally, MCAs form part of South Africa's national conservation estate, which heightens the concern around any loss of habitat, not only aquatic but also terrestrial. MCAs are of very high conservation value and should therefore be treated and managed as formal protected areas. Runoff from this MCA assists in maintaining the water quality and quantity of the Houdenbeks River and groundwater recharge. It should be noted that a significant amount of water is already being captured by the dams in the Houdenbeks River and the many smaller dams in the Quaternary Catchment Area. It was also noted that a significant number of I&amp;APs (including a Private Nature Reserve, private users and commercial users) raised concerns about impacts on downstream water supply upon which they are dependant, and these issues have recently been reiterated. CapeNature therefore objects to the proposed Harmony Dam as it located within a proclaimed Mountain Catchment Area (Kouebokkeveld MCA), which is a formal Protected Area in terms of the National Environmental Management: Protected Areas Act, 2003 (Act No. 57 of 2003) (NEM:PAA).</p> <p>6. According to the DSR the following Specialist Studies have been identified: Biodiversity Assessment; Freshwater Assessment; Heritage Assessment and Agricultural Assessment. However, none of these Specialist studies were available to provide necessary information regarding the development. Nevertheless, the Freshwater report of May 2018 details the regional context of the quaternary catchment and stresses that that "the combined storage capacity of farm dams in the upper Doring River catchment is probably more than the Mean Annual Runoff (MAR). This has dire consequences for river health, especially further down the river catchment, particularly the Doring River, yet additional dams such as the envisaged Harmony and Toeka Dams would serve to worsen the situation." CapeNature's Freshwater Ecologists support these findings, and report that the Houdenbek is a highly stressed catchment, citing the combined effect of the large number of existing dams as negatively impacting flow. This aligns with the evidence presented in the</p> |  | <p>and ecological flow requirements. The dam is intended to store surplus winter flows only, with no abstraction during low-flow periods. The acceptability of the development within the MCA context, taking into account biodiversity and freshwater sensitivities, remains subject to assessment by the competent authority.</p> <p>The Draft Scoping Report identified the required specialist studies; however, detailed findings are presented in the Draft Environmental Impact Report (EIR), which includes the Biodiversity, Freshwater, Heritage and Agricultural assessments.</p> <p>The concerns raised regarding cumulative impacts, catchment stress, and downstream flow reduction are acknowledged and are addressed in the Freshwater Specialist Study. This study confirms that the Houdenbek–Riet system is already under pressure and emphasises the need for strict regulation of abstraction and maintenance of ecological flows.</p> <p>Hydrological considerations, including water availability and catchment yield, are addressed through the Water Use Licence process and supporting technical assessments. The project is therefore assessed within the context of an already utilised system, with cumulative</p> |  |
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## COMMENTS AND RESPONSE REPORT – HARMONY INSTREAM DAM

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|  | <p>2018 Freshwater report which indicates that the proposed development would severely compromise the functioning of the already stressed downstream river system. Consistent with our previous comments, freshwater impacts and downstream cumulative impacts on water quality and quantity remain a concern, especially given that a hydrological study has not been done for the catchment and the sufficient availability of water has not been confirmed. Additionally, CapeNature requested the Witzenberg Municipal Master Water Plan – for us to better determine if the water resources and catchment can handle the pressure of added dams and other water related infrastructure.</p> <p><b><u>Proposed Agricultural Area:</u></b></p> <p>7. The proposed Harmony agricultural area is partially situated within a Terrestrial CBA. CBAs include areas that are in a natural condition that are required to meet biodiversity targets for species, ecosystems or ecological processes and ecological infrastructure. The CBA is mapped due to the presence of the threatened vegetation type, Northwest Alluvium Fynbos Flat and Floodplain Wetland, Freshwater Ecosystem Priority Area (FEPA) River Corridor, as well as for Watercourse protection (Western Folded Mountains) and it is essential that these areas are maintained in a natural or near-natural state, with no further loss of habitat and degraded areas should ideally be rehabilitated. Only low-impact, biodiversity sensitive land uses are appropriate. Additionally, the new Agricultural Layout Alternative is partially situated within the Northwest Alluvium Fynbos Flat and Floodplain Wetland area and floodplain. We recommend that the new layout be moved or adjusted to allow for an adequate buffer for the Houdenberg River and to prevent the agricultural area from being within the floodplain of the river.</p> |  | <p>impacts forming a key component of the environmental assessment.</p> <p>The mapping of the proposed agricultural area within a Terrestrial CBA, associated FEPA river corridor, and floodplain environment is acknowledged. The ecological importance of these areas, including their role in maintaining biodiversity targets, ecological processes, and watercourse integrity, is recognised.</p> <p>The preferred agricultural layout has been refined to minimise impacts where feasible; however, it is acknowledged that portions of the development footprint remain within sensitive areas. The need to maintain appropriate buffers to the Houdenberg River and avoid encroachment into the active floodplain is recognised as a key constraint.</p> <p>Buffer requirements, floodline considerations, and the extent of the agricultural footprint relative to the watercourse will be confirmed and assessed in detail in the Environmental Impact Assessment (EIA), with input from the freshwater and biodiversity specialists. Mitigation measures and potential layout refinements will be considered to reduce impacts on these sensitive features.</p> |  |
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## COMMENTS AND RESPONSE REPORT – HARMONY INSTREAM DAM

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|  | <p>8. The Screening Tool Report indicates that the Environmental Sensitivity for the Terrestrial Biodiversity Theme are of Very High Sensitivity and Medium Sensitivity for the Plant Species Theme – however, the previous Botanical field surveys indicates that the Plant Species sensitivity should be High. The available documentation did not contain a Plant Species or Terrestrial Biodiversity Assessment and seeing that the new Agricultural Layout Alternative is completely situated within the Critically Endangered Kouebokkeveld Alluvium Fynbos vegetation type, confirmation is needed regarding the sensitivity of this particular area and also to ensure that the sandy areas/disturbed area does not contain the recently described ‘new’ Endangered <i>Aspalathus jardini</i> plant species. Additionally, the previous Botanical Assessment indicated that the impact of the clearing of an area of 25 ha for crop production within a Critically Endangered vegetation type would be Very High Negative. Therefore, the precautionary principle should be invoked. The Specialist also indicated that the area is ecologically sensitive. CapeNature therefore does not support the new proposed agricultural area.</p> |  | <p>The discrepancy between the Screening Tool sensitivity and field-based botanical findings is acknowledged. The Botanical Assessment confirms that the proposed agricultural area is located within Critically Endangered Kouebokkeveld Alluvium Fynbos and identifies the area as having high ecological sensitivity.</p> <p>The impact of clearing approximately 25 ha of this vegetation type has been assessed as Very High Negative and irreversible, and the precautionary principle is recognised as applicable in this context.</p> <p>The potential presence of Species of Conservation Concern, including <i>Aspalathus jardinii</i>, is acknowledged. The need for adequate field verification, including seasonal considerations, has been noted and will be addressed in consultation with the relevant specialists and authorities.</p> <p>The concerns raised by CapeNature regarding the acceptability of the agricultural area are acknowledged. The significance of the biodiversity impact, the feasibility of mitigation (including offsets), and the overall desirability of the development will be evaluated by the competent authority as part of the EIA process.</p> |  |
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