

**AN ASSESSMENT OF THE POTENTIAL IMPACT OF THE PROPOSED TRONOX KZN SANDS PORT
DURNFORD MINE PROJECT ON PROPERTY VALUES IN THE MTUNZINI AREA**

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SUBMITTED TO

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Cover page images extracted from: Zini River Estate on-line brochure and Google Earth

EXECUTIVE SUMMARY

The purpose of this report is to assess the potential impacts that the proposed Tronox KZN Sands Port Durnford mine may have on Mtunzini and Zini River Estate property values.

The analysis and assessment contained in this report is undertaken as an independent assessment as required in terms of the National Environmental Management Act, Act No. 107 of 1998, as amended and the Environmental Impact Assessment (EIA) Regulations, 2014, as amended (the Regulations).

Mtunzini is small eco-tourism town on the north coast of KwaZulu-Natal which is characterised by its natural beauty. Its primary attractions are indigenous forests, a pristine river and estuary and long open beaches. The residents of the town are concerned that the proposed mine will have a negative impact on their property values, lifestyle, the economic future of the town and potential to attract further investment. The town already experienced the impact of the Fairbreeze mine operations immediately to the south of the town and is therefore mindful of the new proposed development to the north-west, immediately across the Mlalazi River.

Likely to be most affected by the mine are the residents of the Zini River Estate. An upmarket nature estate, Zini River Estate is marketed as providing a healthy lifestyle which embraces and upholds the natural beauty of Mtunzini's local fauna and flora. The 175-hectare Zini River Estate is situated on the northern side of the town of Mtunzini and will face the mine development on the opposite of the Umlalazi River. The estate is flanked on three sides by the river, natural bush and lagoon. The estate offers inspiring, wide-angle views of the ocean, river and natural plant life. The diverse topography and careful positioning of individual residential properties resulted in optimising the river and sea views. Therefore, of greatest concern is the visual impact that the mine may have on the north and west facing properties. Also, the residents are concerned about the possible impact that noise, dust and traffic emanating from the mine will have on them and their investments.

The proposed Port Durnford mine will be an open cast mine like the Fairbreeze operation¹. The Port Durnford mine will be implemented in two phases: Phase 1 will last from 2025 to 2035 and Phase 2 from 2036 to about 2069. The mine's development hold in a significant regional, provincial and even national macro-economic benefit. The employment benefits of the mine to the local communities are small. It is currently estimated that there will be 25 employment opportunities created through the Phase 1 low-rate mining operation. The full-scale mining operation at Port Durnford will be of similar scale to the current Fairbreeze operation (with 322 employees) and largely act as a replacement reserve as production tails off at Fairbreeze. Consequently, there will be few new job opportunities created however the Port Durnford operation provides opportunity for transition of the Fairbreeze workforce to the new operation.

¹ Fairbreeze is an open case mine of which one section is immediately to the south of the southern boundary of Mtunzini. The mining started in earnest in 2018 and have been expanded to now, in 2024, be within 100m of residential properties.

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The assessment to determine the impact of the mine on Mtunzini property values consider the existing plans and reports for the area of impact, engagements and discussion with residents and stakeholders were held considering the experiences of Fairbreeze on the town, analyse the property value trends in the town and other comparable north coast KZN towns and considers the findings of the bio-physical specialist assessments. The potential impacts of the two phases of the proposed mine on the property values in Mtunzini are mainly due to:

- The possible visual impacts of the mine.
- The generation of dust and visible dust plumes.
- Noise that may emanate from the mine operations.
- The impact of trucks movements.
- The cumulative sense of place impacts due to all the above.

Positive impacts of the mine which may impact on property values are:

- Additional employment in the area. The additional or new employment opportunities created by the mine will be limited and is not a major factor in considering impacts on property values.
- Corporate Social Responsibility contributions: Support which the mine may provide to the town of Mtunzini. The value of these impacts is undefined.

Based on the analysis of the causes and their impacts, taking account of the sensitivity of the Mtunzini property market because of the special eco-tourism nature of the area, given the existence and overlap in impact of Fairbreeze and the proposed Port Durnford mine, and noting the assessed impacts of the specialist reports, the impact of the proposed mine on the Mtunzini property values during the first 10-years of Phase 1, is assessed to be Medium without mitigations and Low with mitigations. The impact of the longer-term Phase 2 of the mine from 2036 to 2069 is assessed to be Medium. Important in this respect is cumulative impact on property values. The long-term time impacts of the mine are likely to contribute further to uncertainties in the property markets. The mining will get within 2km of Zini Estate for 5 years between 2048 and 2053 with the activation of sand tails Dump 8.

Since, the duration and level of intensity of Phase 2 of the mine are significantly higher than that of Phase 1, it is necessary to weight the outcomes. The weighted impact is based on the number of years of each of the phases. Phase 1 will last for 10 years and Phase 2 for 33 years. The overall weighted assessment of all the causes of impacts on property values is assessed to be Medium.

The cumulative impact takes account of the fact that Fairbreeze will still operate during this time and considers the impact if all the causes of impacts are applied at the same time. In the shorter 10-year Phase 1 of the mine, it is assessed that the cumulative impact of the mine on the property values will be Medium without mitigations. With mitigations It is assessed that the impact of Phase 1 of the mine on the property values will be Low. The longer-term Phase 2 impacts, due to the higher level of intensity of the mining operations, and fact that it will continue to operate for 33 years, scores a Medium impact on property values with and without mitigations.

The impact of the mine on the property values of Mtunzini does not present a fatal flaw to the mine and it may continue to be implemented. The impacts of the mine on the property values are, however, important. Attention must be given to the implementation of the mitigations recommended in the

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various specialist reports. In addition to the mitigations recommended by the specialist reports, proactive interventions must be implemented to improve the negative market perceptions that the project have and, to assist in building out the nature-based and eco-tourism development dimensions of Mtunzini and Zini River Estates. Thus, to offset the negative property market impacts, the following mitigation actions are recommended:

1. The mine is to continue with the already existing liaison and coordination meetings between the mine and the Mtunzini and Zini River Estate residents. This should take on the form of regular quarterly or bi-annual meetings between the mine and the residents' associations. The purpose of the meetings will be to ensure that communication lines between the parties remain open, that regular feedback is provided to the communities and that an incidence report of impacts of the mine actions on Mtunzini and Zini River Estate are maintained and actioned.
2. The mine is to use part of their social responsibility budget to facilitate and support the development and enhancing of eco-tourism and nature-based attractions and facilities in Mtunzini. Eco-tourism and environmental projects should be agreed between the parties and action plans devised. The mine has in the past for example, supported Mtunzini in the upgrading of the electrical cables in the town and improving the water flow in the river.
3. The mine is to add value to the marketing and promotion efforts of Mtunzini and Zini River Estate as eco-tourism destinations. This may be achieved by distributing information about the environmental actions undertaken by the mine and may include, for example, the hosting of guided tours to the mine for residents and visitors thereby promoting the image of the mine with the visitors and residential investors.

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ABBREVIATIONS

CAGR	Compounded Annual Growth Rate
CPC	Central Processing Complex
HMC	Heavy Mineral Concentrate
MSP	Mineral Separation Plant
PFS	Pre-feasibility Study
PWP	Primary Wet Plant
ROM	Run-of-mine materials
RSF	Residue Storage Facilities

1 INTRODUCTION

1.1 BACKGROUND AND PURPOSE

The purpose of this report is to assess the impact of the proposed Phases 1 and 2 of the Tronox KZN Sands Port Durnford mine on property values in Mtunzini.

The Scope of Work entails the following:

- Critical to the evaluation is to determine the change in historical property values (increasing or decreasing) in Mtunzini. This is to provide a reasonable baseline for the assessment of:
 - Change in property values because of visual impacts, air quality and noise.
 - Change in property values property values in Mtunzini.
 - Change in property values specifically in Zini Estate.
- Benchmarking of Mtunzini against other east coast towns. This will require an analysis of property value changes in the Mtunzini area over a reasonable timeframe (pre and post mining at Fairbreeze) and the comparison of this to other coastal towns along the North Coast and their property fluctuations over the same timeframe. This will distinguish economic cycle changes versus those induced by mining in the area.
- Determining the cumulative impact on property values in the formal residential property market in the immediately surrounding area.
- The Interfaces with the Social Impact Assessment (impact on current and proposed land use), Air Quality, Noise, Visual (visual impact, change in sense of place) must be taken into consideration.

1.2 METHODOLOGY

The methodology followed in undertaking the property value impact assessment is as follows:

1. Study the property related comments received during the public participation process.
2. Review the project components and parameters relevant to this assessment.
3. Identify the property types and areas that are most likely to be impacted by the project and, the project parameters that may have an impact on property values.
4. Data analysis of property trends and values drawing a profile of current property market. Information and data from Lightstone, Rode Report, Property 24 and other property related publications are used to determine the current property trends, values and changes over the last 5 years and in comparable coastal towns. All available property data is used in the analysis i.e., no samples were drawn.
5. Secondary research: Investigate the findings of comparable case studies.
6. Conduct semi-structured surveys with registered interested and affected parties from Mtunzini and elsewhere. Telephone interviews with estate agents and other key stakeholders in the project area of impact, particularly in Mtunzini.
7. Determine the factors that drive property trends in Mtunzini.
8. Identify anticipated new property development projects in the area of influence of the proposed project.

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9. Formulate perspectives on national, provincial, and local economic futures and impacts on property trends and values.

1.3 EVALUATION OF IMPACTS METHODOLOGY

The following methodology is used to evaluate the significance of the impact on property values. The evaluation system is applied differently to assess the positive impacts

Physical Extent Rating of Impact

Score	Description
1	the impact will be limited to the site;
2	the impact will be limited to the local area (local study area);
3	the impact will be limited to the region;
4	the impact will be national; or
5	the impact will be international;

The duration, wherein it is indicated whether the lifetime of the impact will be:

Duration Rating of Impact

Score	Description
1	of a very short duration (0 to 1 years)
2	of a short duration (2 to 5 years)
3	medium term (5–15 years)
4	long term (> 15 years)
5	Permanent (this is considered permanent if the impact will be experienced post mine closure)

Reversibility: An impact is either reversible or irreversible. How long before impacts on receptors cease to be evident.

Reversibility of Impact

Score	Description
1	The impact is immediately reversible.
3	The impact is reversible within 2 years after the cause or stress is removed; or
5	The activity will lead to an impact that is in all practical terms permanent.

The magnitude of impact on ecological processes, quantified on a scale from 0-10, where a score is assigned.

Magnitude Rating of Impact

Score	Description
0	small and will have no effect on the environment.

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Score	Description
1	minor and will not result in an impact on processes (to be defined by individual specialist fields).
2	low and will cause a slight impact on processes.
3	moderate and will result in processes continuing but in a modified way.
4	high (processes are altered to the extent that they temporarily cease).
5	very high and results in complete destruction of patterns and permanent cessation of processes.

The probability of occurrence, which describes the likelihood of the impact actually occurring. Probability is estimated on a scale where:

Probability Rating of Impact

Score	Description
1	very improbable (probably will not happen).
2	improbable (some possibility, but low likelihood).
3	probable (distinct possibility).
4	highly probable (most likely).
5	definite (impact will occur regardless of any prevention measures).

The significance, which is determined through a synthesis of the characteristics described above (refer formula below) and can be assessed as low, medium or high;

- The status, which is described as either positive, negative or neutral;
- The degree to which the impact can be reversed;
- The degree to which the impact may cause irreplaceable loss of resources; and
- The degree to which the impact can be mitigated.

The significance is determined by combining the above criteria in the following formula:

Significance = (Extent + Duration + Reversibility + Magnitude) x Probability

[S= (E+D+R+M) ×P]

Where the symbols are as follows:

Symbol	Criteria
S	Significance Weighting
E	Extent
D	Duration
M	Magnitude
P	Probability

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The significance weightings for each potential impact are as follows:

Overall Score	Significance Rating (Negative)	Significance Rating (Positive)	Description
< 30 points	Low	Low	where this impact would not have a direct influence on the decision to develop in the area
31 - 60 points	Medium	Medium	where the impact could influence the decision to develop in the area unless it is effectively mitigated
> 60 points	High	High	where the impact must have an influence on the decision process to develop in the area

The impact significance without mitigation measures will be assessed with the design controls in place. Impacts without mitigation measures in place are not representative of the proposed development's actual extent of impact and are included to facilitate understanding of how and why mitigation measures were identified. The residual impact is what remains following the application of mitigation and management measures and is thus the final level of impact associated with the development. Residual impacts also serve as the focus of management and monitoring activities during Project implementation to verify that actual impacts are the same as those predicted in this EIA Report.

1.4 DATA AND INFORMATION SOURCES

The bibliography at the end of the report lists the information documents and data used to inform the assessment. The important property value data sources referred to are:

- Analysis of status of property in Mtunzini:
 - Lightstone
 - Property 24
 - Values of properties currently in the market
 - Rode Report
 - Municipal Valuation roll
 - STATS SA Residential Property Price Indices 2010 to 2023.

Interviews were conducted with residents and stakeholders in March and April 2023 and the results are included in this report. The comments received from residents and stakeholders during the viewing of the Draft Scoping Report in March 2023 and again in 2024 are considered as far as it pertains to the impact on the property values in Mtunzini and Zini River Estate. The specialists' reports completed from June to December 2024 dealing with the visual, noise, dust and traffic impacts were consulted to inform the nature, scale and significance of the impacts.

1.5 REPORT OUTLINE

This report deals with the following:

Section 2: Description of the Port Durnford mine development.

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Section 3: Description of the Area of Impact of this assessment.

Section 4: Identifying potential impacts on the property values of Mtunzini.

Section 5: Analysis of historic property value trends.

Section 6: Evaluating the impacts of the mine on property values.

Section 7: Conclusions and recommendations.

2 DESCRIPTION OF THE TRONOX PORT DURNFORD PROJECT²

This project was conceptually planned for in 2007 and formally planned in 2015 when Tronox commissioned Hatch (Pty) Ltd (Hatch) to complete a concept study for the development of a mining operation at Port Durnford. Following the concept study, Tronox commissioned Hatch to conduct a Pre-Feasibility Study¹ (PFS) on the Port Durnford site which was concluded in November 2020. The concept study assessed multiple mining options and rates. The technical and financial evaluations determined that the Port Durnford mining operation should be a stand-alone operation, mined in two phases (Phase 1 and Phase 2) (WSP, October 2024).

- Phase 1 would last 10 years from 2025-2035 at a low production rate of 70,400 tons per annum with operation only occurring on five working days in the month, while
- Phase 2 lasts 33 years from 2036-2069 at a design production rate of 3000 tonnes per hour, 24 hours per day, 365 days a year.

The Phase 1 mining operations will be situated on the Remainder of Richards 16802. This land is currently under commercial forestry, leased by Mondi, owned by the Phalani Community Trust.

Phase 1 will have a mining footprint of 41 ha and will be located on Portion 1 of Richard 16802, over a ten (10) year period, between 2025-2035 during Phase 1. The mining will operate at a rate of 100 tph, 70 400t pa. Active mining will take place five (5) days a week per month, for 12 hours a day.

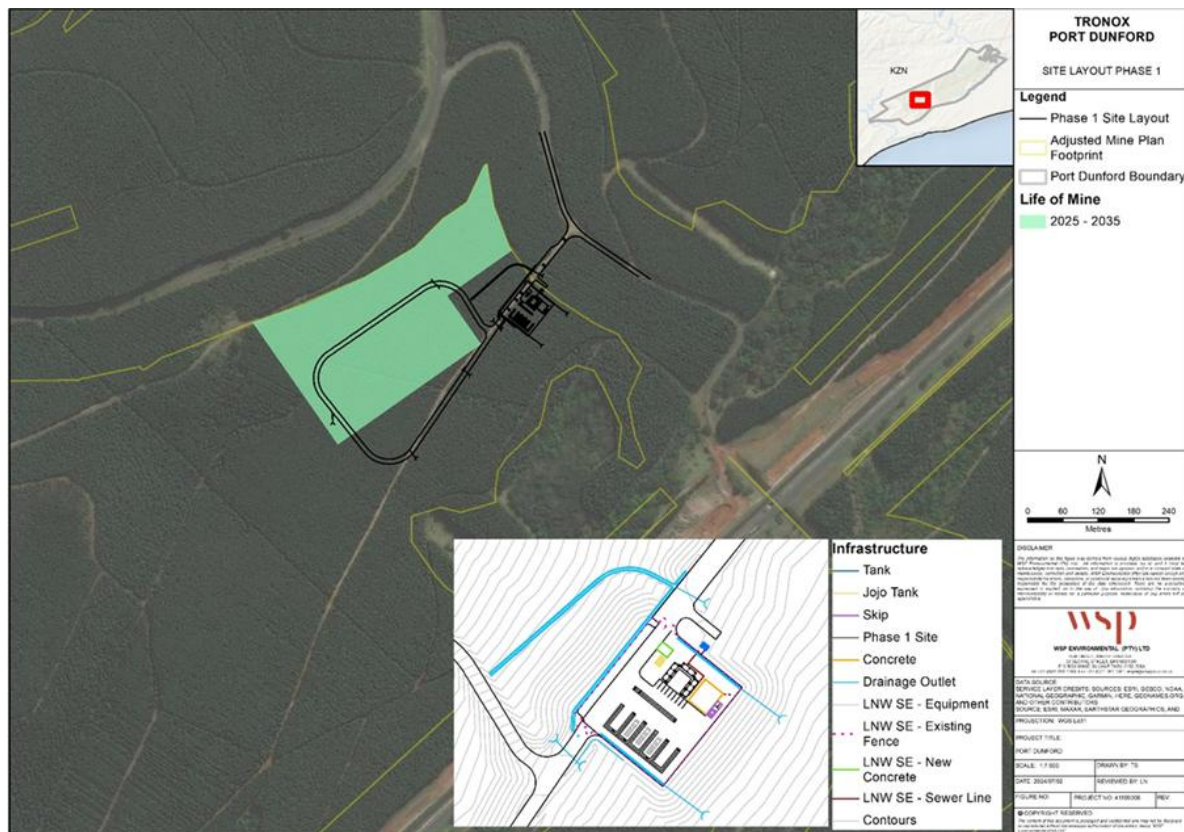
The run-of-mine (ROM) material will be mined mechanically and hauled via trucks to the Fairbreeze Mine for stockpile and processing. No processing on site is proposed for the Phase 1 mining operation. ROM will be transported to Fairbreeze Mine by truck on public roads (the R102 and N2) for further processing. It is expected that 4 x 30t trucks will be used to transport the mined material from Port Durnford to Fairbreeze Mine. It is anticipated that 9 truck cycles will be used per day for the 5 days each month that the site is being actively mined. (WSP, October 2024)

The mined-out ore bodies at Fairbreeze Mine will be used for pit infill from the Port Durnford Phase 1 operation for the first 11 years of mining. The hydraulic mining process at the Fairbreeze Mine will continue as per current practice at Fairbreeze, to process the stockpiled material. Hydraulically reclaimed ROM slurry will be pumped to the existing Fairbreeze Primary Wet Plant (PWP) for processing. The processed material will then be trucked to the existing Mineral Separation Plant (MSP) located at the Central Processing Complex (CPC) in Empangeni as part of the Fairbreeze product. (WSP, October 2024).

² For a full description of the mine, its phasing and the components of each phase, refer to Section 3 of WSP, Final Scoping Report, October 2024.

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Figure 1: Phase 1 layout plan



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The infrastructure for Phase 2 will be constructed during the Phase 1 mining period (2025-2036), however, mining and processing for Phase 2 will only commence in 2036. The proposed Phase 2 operation comprises opencast mining, on-site processing of ROM material in a primary wet plant (PWP), the on-site backfill and disposal of both coarse and fine sand tailings from the PWP and the transport of heavy mineral concentrate to the existing Tronox mineral separation plant (MSP) located in Empangeni within the Tronox central processing complex (CPC). At the MSP the concentrate is further refined to yield the target minerals. Coarse sand tailings that are not separated out at the PWP and are thus transported to the MSP as part of the concentrate, but which do not yield product, are returned to the mine and are reintroduced into the coarse sand tailings backfill stream. The Port Durnford mining footprint is 1 152 hectares which will be mined over a 33-year period, between 2036-2069. The planned rate of mining will be 3,000 tph, 24 hours a day, 365 days a year (WSP, October 2024).

Figure 3: Proposed Phase 2 Infrastructure layout



Source: (WSP, 2024)

The potential for new employment opportunities due to the mine's intended operation are limited as it is currently estimated that there will be 25 employment opportunities created through the Phase 1 mining operation. The Phase 2 mining operation at Port Durnford will be of similar scale to the current Fairbreeze operation (with 322 employees) and largely act as a replacement reserve as production tails off at Fairbreeze. Consequently, there will be few new job opportunities created. (WSP, October 2024).

3 DESCRIPTION OF THE AREA OF IMPACT

Mtunzini is a small, relatively isolated, coastal town that is situated halfway along KwaZulu-Natal's coast approximately 140 km north of Durban, 40 km from Richards Bay / Empangeni and about 100 km from the King Shaka International Airport. The town is described as an eco-tourism town with a permanent population was 2,199 in 2011 (Frith, 2011) and 1,258 in 2001³. The population of the town has grown further since 2011 mainly due to the development of the Zini River Estate and the addition of cluster housing projects in Mtunzini. The estimated 2022 population of Mtunzini is about 3,200⁴.

The town is characterised by its natural beauty and the primary attraction is indigenous forests, a pristine estuary, and long beaches. Mtunzini falls in a declared Conservancy and the high environmental standards of the town are regulated by KZN Wildlife (Interview, 2023) and (Zini River Estate, Undated).

The tranquillity, natural beauty, and environment of Mtunzini is the main attraction for people to live in and visit the town. There are, for example, reported to be more than 400 bird species in the Conservancy. The uMlalazi Nature Reserve, controlled by Ezemvelo KwaZulu-Natal Wildlife, covers 1 028 hectares. Zebra is often found grazing in the nature reserve and there is a thriving population of giraffe as well as waterbuck and several smaller antelope (uMlalazi Municipality , Undated). The uMlalazi Reserve and the Amatikulu Reserve together form the Siyaya Coastal Reserve, which stretches from the uMlalazi River in the north, in a narrow band along the coast southwards almost to the Thukela (Tugela) River. There are 5 different ecosystems, namely estuarine, dune scrub, dune forest, coastal riverine and coastal forest which characterise the Mtunzini area providing diverse natural environment.

The town has grown quickly over the last 5 to 10 years with the development of the Zini River Estate and densification of existing large erven in the town. There has been a rapid pick-up in demand after Covid with people looking for alternative lifestyles and new cluster housing developments have taken place in the last 10 years in response to the demand. Property prices increased and compared to Richards Bay, Empangeni and Eshowe, are relatively high. A significant part of the town's income is derived from tourism. (Joyce, 2014), (Interview, 2023)

There is a government run primary school and privately owned pre-primary school in the town. Secondary schools are in Felixton and Empangeni and bus services are available to take learners to school and back daily. The town has five restaurants, coffee shops, three chemists, hardware stores, a large Spar. A new shopping centre was established in the town in 2022 catering for the everyday shopping needs of the residents. The Richards Bay and Empangeni shopping centres are about 40 km away (80 km round trip).

³ Inclusive of Zini River Estate.

⁴ The 2022 Census data at subplace level is not yet available.

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Figure 4: Aerial view of Mtunzini including Zini River Estate



Source: Google maps, 2023

Figure 5: Layout of Zini River Estate



Source: Approved Layout Plan 2495 11 September 2015

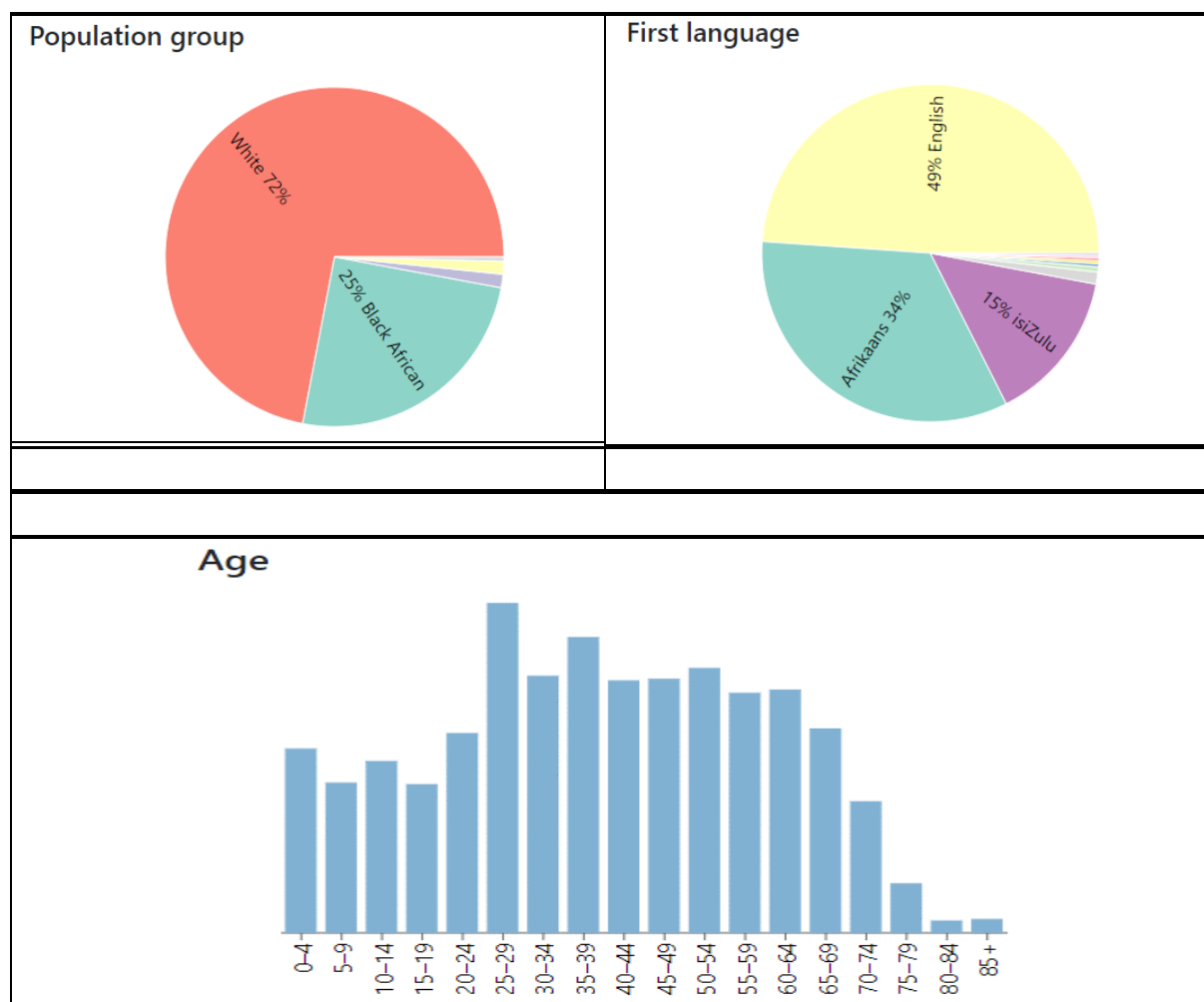
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The Umlalazi Municipality describes Mtunzini as:

“The coastal town of Mtunzini, is a greenbelt situated on the North Coast of Natal, on the banks of the uMlalazi River and bordering on the uMlalazi Nature Reserve. Mtunzini is mainly a residential town, offering superb homes in a quiet and relaxed atmosphere, within comfortable driving distance of the N2 highway and the industrial and commercial growth areas of Richards Bay and Empangeni. Mtunzini has all the basic shopping facilities, doctors and churches. Mtunzini is a quality residential and eco-tourist destination in South Africa.” (Umlalazi Municipality, 2024).

The estimated 2022 population of Mtunzini is about 3,200. The 2011 demographic profile of the population consists of 72% white persons with nearly 50% English speaking as a first language. Of the permanent population of Mtunzini only 20% is younger than 20 years of age and about 12% older than 65. The population composition of the town is unlikely to have changed significantly since 2011 but have shown growth in numbers.

Figure 6: Salient demographic profile of the town, 2011⁵



Source: 2011 Census

⁵ Census 2022 data at sub-place level is not yet available. Personal communication with StatsSA, June 2024.

4 IDENTIFYING POTENTIAL PROPERTY VALUE IMPACTS

Potential impacts on the property values of the Mtunzini and Zini Estate are explored in this section in terms of:

1. The perceptions of receptors as recoded during engagements with interested and affected parties and views expressed in previous reports.
2. Many of the impacts identified also reported on the impact of the Fairbreeze operation on Mtunzini and are therefore included in this section.
3. Potential impacts derived from the specialist reports on the visual, noise, air quality, traffic and social impact reports, mostly completed after July 2024.

4.1 PERCEPTIONS OF RECEPTORS AND INTERESTED AND AFFECTED PARTIES

4.1.1 COMMENTS AND RESPONSES REPORTS

In preparing the final scoping report in October 2024 a public engagement process was held, and a Comments and Responses Report was produced by WSP. The comments contained in the CRR include comments received via returned comment and registration sheets, SMS's, telephonically and e-mail together with issues and comments raised during various in person engagements with stakeholders. (WSP, October 2024a)⁶. An Issues and Response Report was also prepared by WSP in March 2023 following the outcome and consultations held during the scoping process in 2023. (WSP, March 2023). The comments received that relate to property value concerns in Mtunzini and Zini River Estate are listed in the tables overleaf

In summary, the property related issues identified in the reports are:

- A general concern about the proposed development related to the closeness of the project to the residential areas of Mtunzini. The visual impact seems to be the main concern of the respondents.
- The visual impact of the proposed project on views from Zini River Estate. The visual impacts on the natural eco-estate character (green bush, hills, mountains, and river) of Zini River Estate.
- Possibly impacts on the properties due to dust and noise.
- Negative impact on proposed property developments in proximity to the Umlalazi River because of visual impacts.
- Decreasing property values in the Mtunzini and Zini River Estate because of visual impacts, air quality and noise.
- Clarity about mining activities proposed within the lease area.
- The mine is the biggest threat to the entire region which may stifle the town's development potential.

⁶ The comments contributed by I&AP's (stakeholders) during the initial scoping phase (DMRE1 Ref: KZN 30/5/1/2/2/10117 MR) remain unchanged and valid to this S&EIA Process (DMRE Ref: KZN 30/5/1/2/2/10133MR). The updated CRR that captures and addresses comments received from the 2024 Scoping Phase of the S&EIA Process.

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Table 1: Table of Mtunzini property related comments received during the 2024 Scoping Phase (WSP, October 2024a)

COMMENTS RECEIVED THAT ARE MTUNZINI PROPERTY RELATED	COMMENTS RAISED BY	INTERPRETATION: CAUSE AND CONSIDERATIONS OF THE IMPACT
About one issue a month is usually raised around dust. In this last month the MRA received about 50 issues related to dust and property value.	Mtunzini Residents Association Focus Group Meeting	The cause of the dust is likely to be from the Fairbreeze operation. It however is sufficient to raise a concern with residents about the impact of the proposed project.
I remain very concerned about the dust impacts due to prevalent wind directions on my property and the wetland below me (on the southern bank of the river in the ZRE estate)! Unattended issues also risk devaluation of ZRE property values, it is not right that returns earned from the mine come at stakeholder expense.	Mtunzini Resident	Same as above
I would like to strongly object to the proposed mining operation north of Mtunzini. I have a list of concerns – Decrease value of my land in Mtunzini, Effect on the wetland and river system, Over what period you propose this operation will start and end, Re-habitation with a timeline Etc etc	Mtunzini Resident	General concern about the impact of the mine of properties and the environment.
I would like to state that from this initial communication and not knowing detail on the proposed project, I object to the proposed Tronox mining project North of Mtunzini. It is of great importance that a public meeting is arranged to inform the owners and occupants of Zini River Estate what the plans are and how the mining will affect the town and estate.	Mtunzini Resident	Uncertainty concerning the project due to possible insufficient communications about the project and its details.
I am a homeowner in the Zini River Estate. Living here has come at a huge cost to me, and the reason is to live in a pristine area. This proposed mine will destroy the value of this estate and the town of Mthunzi, hence the strong opposition to this application.	Zini Resident	High value that the residents place on the environment within which they want to live.

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COMMENTS RECEIVED THAT ARE MTUNZINI PROPERTY RELATED	COMMENTS RAISED BY	INTERPRETATION: CAUSE AND CONSIDERATIONS OF THE IMPACT
We strongly object about the planned mining activities north of Zini River Estate. With the normal Northern Western winds blowing we will be covered in dust permanently.	Mtunzini Resident	Concern about dust impacts specifically.
Location of the Sandtails: 8B, A-2, 4, situated at the southern point of the mine location will have a negative impact on the Mtunzini Community. The visual impact and the impact of dust from the prevailing northly winds are an environmental hazard.	Mtunzini Resident	Visual and dust impacts of the project.
It seems that you are now planning to mine closer to the Umlalazi river than with your previous proposal. Already the amount of dust that comes from your Fairbreeze mine is unacceptable, and as you know that is on Mtunzini towns Southern border. Now you propose to mine on Mtunzini towns Northern border. We have a prevalent North wind that blows here which is going to result in a lot of dust. I do not want to look at unsightly mining operations from my house which overlooks your proposed mining area. This operation will definitely result in reducing my properties value as I look onto your proposed mining area.	20 September 2024 Mtunzini Resident	Impact of dust from Fairbreeze and now the potential impacts from the Port Durnford mine. Concern about a dust and visual impact.
I am a member of the Zini River Estate and have been made aware of your application for mining rights in the Mtunzini and surrounding areas. I strongly object and demand an urgent public meeting to inform members of the community of exactly what your plans are.	21 September 2024 Mtunzini Resident	A general concern raised but no reasons specified.
I would like my strong objection to the mining near the Zini River estate to be noted and request an urgent public meeting to discuss the impact it will have on our lives and environment going forward.	23 September 2024 Mtunzini Residents	A general concern raised but no reasons specified.
Significant changes to visual impact from the northern-most sections of the Mtunzini Village, and the Zini River Estate in particular.	Mtunzini Residents Ass.	Concern about the visual impact.

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COMMENTS RECEIVED THAT ARE MTUNZINI PROPERTY RELATED	COMMENTS RAISED BY	INTERPRETATION: CAUSE AND CONSIDERATIONS OF THE IMPACT
As a resident of Zini River Estate Mtunzini, I would like to register my concern regarding the above proposal, as to what impact this will have on both the environment and physical distance to Zini River Estate.	Mtunzini Residents	Concern about the impact on the environment and the proximity of the proposed development.
<p>I hope this letter finds you well. I am writing to express my deep concern regarding the planned future mining operations by Tronox near Port Durnford in the north, close to my residential area. I believe these activities will have a negative impact on my property and quality of life.</p> <p>It has come to my attention that the proposed open-cast mining in the area is expected to leave behind large piles of sand. These sand piles, if not managed appropriately, will likely result in dust clouds, which could severely affect the cleanliness and air quality of the area. I am particularly worried about the potential damage to my home and swimming pool due to the accumulation of dust, as well as the associated health risks to my family.</p> <p>Furthermore, I believe that the presence of these sand piles and the ongoing mining operations will significantly reduce the value of my home. The disruption caused by noise, dust, and heavy machinery will make the area less desirable for future buyers, which is deeply concerning for someone like myself who has invested heavily in this property.</p>	Mtunzini Residents	Concern about the negative impact on property values and quality of life.
I am a house owner on the Zini River Estate as well as being an Honorary officer at the Siyayi Coastal Reserve and would like to add my voice to the concerns expressed by the various affected groups in and around our beautiful village. My concerns go above the fact that our peaceful existence is now going to be compromised with housing prices surely falling dramatically, but more that our estuary which is already under attack from malpractice by farming practices causing silting up of the estuary.	Mtunzini Residents	Concern about the impacts on property values and the environment.

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COMMENTS RECEIVED THAT ARE MTUNZINI PROPERTY RELATED	COMMENTS RAISED BY	INTERPRETATION: CAUSE AND CONSIDERATIONS OF THE IMPACT
Property Values: As a result of the above impacts ⁷ , one of our principal concerns is the erosion of property values in Mtunzini, and particularly on the properties in the Zini River Estate, where a further 98 currently vacant properties are still to be developed. Previous assessments have not clearly recognised the unique combination of attributes of the Mtunzini Village, which has resulted in it being both the local economic hub, significant rates contributor, and regional tourist centre it is today. It is our view that the attractiveness and sustainability of Mtunzini is a regional asset worth very careful preservation.	Zini River Estate	Concern about stockpiling, visual pollution, light pollution, noise, dust and water impacts
We are concerned that there will be substantial and adverse changes to the visual impact of the mine when viewed from the northern-most sections of the Mtunzini Village and the Zini River Estate in particular because of plans to create massive topsoil and material dumps, some of which will have heights of ~40 meters above ground level. The village has, in recent months, experienced significant and harmful impacts from mining activities on the Fairbreeze mine, now that the mining phase is over, and rehabilitation has begun. The residents of the Zini River Estate are particularly concerned about the possibility of an erosion of property values because of the proximity of the mine.	Mtunzini Residents Association	Concern about the visual impact on property values.

Table 2: Table of Mtunzini property related comments received during the 2023 Scoping Phase (WSP, March 2023)

COMMENTS RECEIVED THAT ARE MTUNZINI PROPERTY RELATED	COMMENTS RAISED BY	INTERPRETATION: CAUSE AND CONSIDERATIONS OF THE IMPACT
The project will have a negative impact on my property	Zini Estate landowner and land developer	A general concern raised but no reasons specified.
I am concerned as a property owner in close proximity to the project.	A property owners and resident of Mtunzini.	Possible cause of impact the closeness of the proposed

⁷ NOTE: The impacts referred to include, amongst others, stockpiling, visual pollution, light pollution, noise, dust and water impacts.

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COMMENTS RECEIVED THAT ARE MTUNZINI PROPERTY RELATED	COMMENTS RAISED BY	INTERPRETATION: CAUSE AND CONSIDERATIONS OF THE IMPACT
		development possibly related to dust and noise.
The project will impact on my property and views.	Property owner in Zini River Estate.	Visual impact of the project.
<p>The Zini River Estate is considered an ECO estate and many homeowners have bought their stands for the views of the surrounding hills and natural setting (green sugar cane fields, natural bush and views of the mountains). Mining of Port Durnford will have a significant impact on the visual landscape and could possibly result in property values decreasing.</p> <p>With the proposed mining of Port Durnford and due to the issues raised above my concern is that property prices on the estate will be impacted and thus impact on my property investment made in buying my house.</p>	Property owner in Zini River Estate.	<p>The project will impact on the natural settling and surroundings of the Zini river Estate which is an eco-estate.</p> <p>Impact on the visual landscape Zini Estate</p>
The village of Mtunzini is close to the plant area of the proposed operation- particularly in terms of the visual impacts	Resident of Zini Estates	Closeness / proximity of the project to Mtunzini village and the natural / plants area.
<p>Concerned about the unsightly view and dust that might emanate from the working mine and will be dispersed across our home on the estate due to strong south/westerly wind that blows.</p> <p>We face the Umlazi river across from Port Durnford so this proposed project will have an adverse effect on our living standard and valuation of property</p>	Residents of Zini Estates and manager of the estate.	Visual and dust impact of the mine.
<p>Zini River Estate is an ECO Estate which many residents have purchased properties on due to the tranquil setting, surrounding views of the hills and mountains. Our concern is that the proposed mining operation could affect property prices on the estate and the desirability for people to invest on the estate.</p> <p>Based on the above it is the Estate's view that the proposed mining operation will have a significant impact on the estates viability and as such are not in support of the development until such time that our fears and concerns are addressed.</p>	Residents of Zini Estates and manager of the estate	Impact on tranquil setting related to noise, dust, and visual impacts.

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COMMENTS RECEIVED THAT ARE MTUNZINI PROPERTY RELATED	COMMENTS RAISED BY	INTERPRETATION: CAUSE AND CONSIDERATIONS OF THE IMPACT
Aesthetics in the area is important to maintain the character of the town and surrounds. Please think about leaving a tree screen to shield the proposed mining operations from the public eye should it proceed	Resident	Visual / aesthetics landscape screening. Possible mitigated by tree screening of the development.
Please confirm what the mining boundary closest to Mtunzini will be (Penarrow/ Waterloo)? Residents are concerned about negative impacts on their property value. We cannot have a situation where the mine starts and negatively impacts property value. This must be looked at.	Resident	Proximity of the development.
Residents are concerned about negative impacts on their property value. We cannot have a situation where the mine starts and negatively impacts property value. This must be looked at.	Resident	The reason for the concern is not specified.
We are proposed developers of a R140 million luxury residential estate which would overlook the mining area. The project will need to be abandoned if mining goes up to the river and over the flats.	Land developer	Visual impact and closeness of the development.

Source: Augmented from (WSP , March 2023) and (WSP, October 2024a)

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4.1.2 STAKEHOLDER ENGAGEMENTS

During April and May 2023 interviews were conducted with key stakeholders and interested parties in and around Mtunzini and Zini River Estate. The engagements were conducted by telephone interviews by the researchers and on-site interviews by the social impact assessment team. Persons engaged with included representatives of the owners and residents in the town and Zini River Estate and estate agents operating in the area. Comments made during the interviews and discussion concerning the impact of the proposed Port Durnford mine are the following:

Comments made about Mtunzini and Zini Estate are:

- The experiences of Mtunzini town from the Hillendale and Fairbreeze mines were poor. Some of the hill tops and mine dumps were left unrehabilitated and remains unresolved issues.
- Mtunzini is no-longer a “sleepy town” – it has grown a lot lately:
 - A new shopping centre was developed in 2022.
 - Several cluster developments have taken place.
 - The Station Road developments.
 - Property values in Mtunzini is high for the region.
 - Some of the mine’s senior management lives in town.
 - People work all over in the region from Mtunzini – to Richards Bay, Eshowe, and Empangeni. Some of the Ngwelezane Hospital doctors, for example, live in Mtunzini and Bell Equipment managers.
 - Water and sanitation infrastructure needs to be upgraded. Sections of the town are without water from time to time due to the rapid expansion of the town.
- People are by-enlarge moving into the area because it “is a nice place to live”. About 3 to 4 years ago there was no rental stock available in the town. That is why cluster housing development become popular.
- The value of the property in the estate has tripled since 2005, currently 3.8-5/6 million a property.
- There is 4 ha of land facing the sea area and about 14 units within Zini River are currently being built.
- Zini River has plans to develop 200 further houses of which 50 are built.
- There are planned developments in lot 167, close to the N2.

Concerns about the proposed development, as far as the impact on property values are concerned, relate to:

- The concerns about the proposed project and its impact on property values must be considered within the context of the conservancy and eco-tourism nature of Mtunzini and Zini River Estate.
- The greatest concern is about the visual impact for the houses facing the area to the mined. This applies more to the Zini River Estate area than Mtunzini.
- Wind resulting in dust from the mine is a concern also from a visual impact on the residential houses and estates. When the northwest wind blows, there is a lot of dust in the residential area.
- The impact of trucks movement towards the north of Mtunzini are a great concern as it may impact on the residents in general.

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It was recognised during the interviews that the proposed development may also have some positive impacts on the Mtunzini and Zini Estate. Such positive impact may be:

- Tronox have in the past and may in future make positive contributions to the development of Mtunzini. Tronox helped with a water pipeline from uMhlathuze and supplied power cables in Mtunzini.
- The demand for accommodation, specifically as far as the BnBs are concerned, have increased with Tronox workers living in the town.
- The water table has since improved due to the removal of pine trees by Tronox and the river now flows stronger, unlike before.
- The development will make some contribution to employment opportunities in the area.

4.2 IMPACT OF FAIRBREEZE ON MTUNZINI

During the April and May 2023 interviews stakeholders and interested parties reported that the Fairbreeze development and operations had an impact on Mtunzini. The impact is mainly experienced by people living next to the boundary with Fairbreeze, see Figure 7. The truck movements, bleeping sounds and flood lights have an impact on their living experience and property values. The impact on the northern parts of the town is less and those residents are usually unaware of the Fairbreeze operations. The mining operations do, however, also have an impact on the overall “sense of place” of Mtunzini due to the visual impact when entering the town. The figure overleaf how Fairbreeze’s mining operation south of the boundary with Mtunzini in 2018 and 2024.

In 2011 Golder Associates (Golder Associates , 2011, June) reported as follows with respect to the anticipated impact of Fairbreeze on the town:

“The Mtunzini town residents are affected by this application due to their proximity to the proposed Fairbreeze C-Extension mining operation. However, a separate SIA was completed in 2004 for this ore body (Golder Associates , 2011, June).

- *Loss of Sense of Place - Implement mitigation measures from the visual impact assessment.*
- *MODERATE IMPACT: Establish grievance mechanisms to deal with complaints throughout the operations. Establish ongoing communications between the mine and the residents, farmers and tribal authority. On-going rehabilitation as described in the BAR should occur.*
- *Dust - concerned that dust from ore body C and C extension will be major negative impact on their living conditions and business operation. A tree barrier between ore body C and C extension needs to be maintained between the Twin Stream Nursery and Xaxaza Caravan Park to minimise dust impacts.”*

Also, in 2011 and part of the same assessment, Graham Muller Associates reported as follows (Graham Muller Associates, 2011, p. 42):

- *The mining at sites A, B, C and D, and the slime dams will negatively impact agricultural property values where farmers reside on the farms. This could not be established when consulting the farmers located around the Hillendale Mine as none of them have attempted, throughout the duration of the mining, to sell their properties. However, crops of sugarcane farmers in the Mtunzini area have struggled over the last 5 years and therefore land is currently not in high demand. The farmers around the mining activities have expressed concerns that*

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having a mine and slime dams abutting their farms would almost certainly weaken the already limited demand for land and therefore adversely affect the selling price of the farm.

Figure 7: Fairbreeze mining on the portion south of the boundary with Mtunzini, 2018 and 2024.



“The Fairbreeze C-Extension Socio-Economic Study finds that “the property market in the study area was constrained by tight supply and high demand owing to regional economic expansion and thus property prices are likely to continue rising”. The study does note that if the mining operations were to have significant negative impacts on Mtunzini, causing the town to become a less desirable location than competitor towns like Eshowe; Richards Bay or Empangeni, then property prices may drop. The mining of ore bodies A; B; C and D, as indicated in the assessment above, is not expected to have highly

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significant or pronounced negative impacts on Mtunzini. As such the increasing price trend of property in Mtunzini is unlikely to be reversed. Rather, increased demand for Mtunzini accommodation by Exxaro workers may push up the property prices in the area” (Graham Muller Associates, 2011, p. 53).

And further:

“Dust - The concern is that dust from the mining sites combined with strong coastal winds, may create nuisance and health problems which will discourage tourists from visiting Mtunzini. The overall finding was that the significance of the dust pollution impact from the A, B; C and D ore bodies is considered to be limited as it is unlikely that it will affect Mtunzini’s core attractions, namely the beach and the estuary and will only impact on tourism establishments in the south of the town and the Twinstreams Environmental Education Centre.” (Graham Muller Associates, 2011, p. 46 to 52)

Conclusion of the Fairbreeze Impacts:

The main negative impacts were found to be the impact of dust pollution; the visual impact; and the impact on the sense of place. All such impacts were found to be moderately significant. In order to offset these negative impacts, it is the recommendation of the project team that Exxaro KZN Sands utilise their social responsibility budget to support the development and extension of eco-tourism attractions in Mtunzini and surrounding areas.

4.3 SPECIALIST REPORTS

The findings of the most relevant specialist reports, as far as impacts on the property values of Mtunzini and Zini River Estates are concerned, are considered in this section. These reports are the visual, air quality, noise (acoustics) and traffic reports.

4.3.1 VISUAL IMPACT ASSESSMENT (WSP, February 2025)

This section provides a high-level summary of the main findings of the visual impact assessment report only in as far as it relates to Mtunzini and Zini River Estates. The visual impact report is an extensive one and, due to the importance of the visual impact on property values, should be referred to itself for the detail analysis. The specialist report addresses the following for Phases One and Two of the mine’s development:

- A visual baseline description of the project site and surrounding landscape.
- An evaluation of the expected visual resource value of the project site and receiving visual landscape.
- An identification of potentially affected receptors and their perception of the visual landscape.
- An impact assessment for proposed project activities, with recommended mitigation measures.

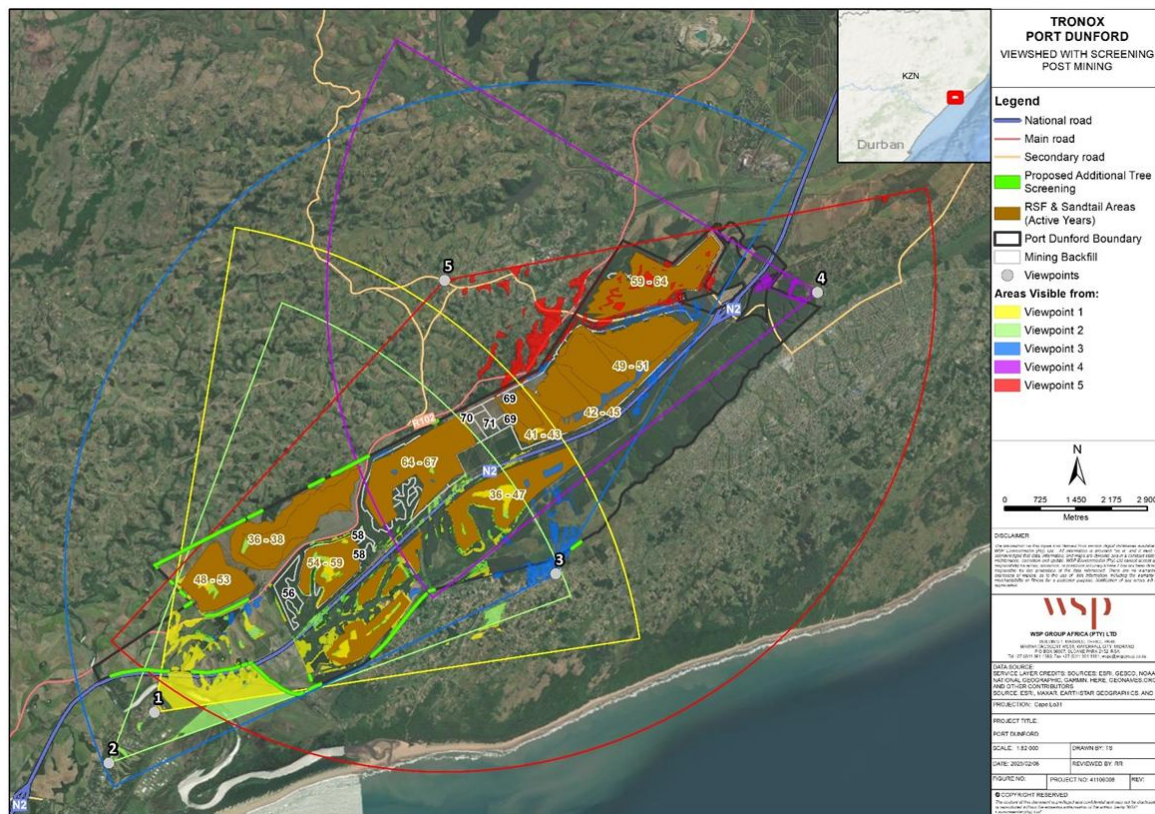
The report states that the proposed Port Durnford project site is in a mostly modified, visually varied setting. Many resident receptors are within 10 km of the mine and attach varying levels of value to the landscape ranging from moderate to high. Specifically, residents of Mtunzini and Zini River Estate assigns a high value to the visual quality of the area and expressed concern about the proposed mining development.

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The mining process on the site will change over time and its visual impact will therefore change over time and from different vantage points. The opencast mining blocks will typically be backfilled one to two years after they have been mined, with the RSF dumps being constructed over backfilled areas when they become available. The individual RSF side walls will typically be built up for between two to six years and then progressively rehabilitated. Similarly, deposits on the sand dumps will last for between six and eleven years before being rehabilitated.

Post-mining viewsheds with vegetation screening from five representative viewpoints within study area are shown in the following figure. The visual impacts as observed from the Zini River Estate and other establishments west and southwest of the mine, will largely be caused by RSF 9.

Figure 8: Viewshed (post mining) with vegetation screening from five representative viewpoints within study area



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Table 3: Visual impact from the eastern end of Zini River Estate (Viewpoint 1)

Year and Distance	Impact
Visible from 2036 to 2038 roughly 3 to 6 km from the eastern end of Zini River Estate caused by RSF 9.	The visual impacts as observed from the eastern end of Zini River Estate (viewpoint 1) will largely be caused by RSF 9 (roughly 3-6 km from this location) which would be visible from 2036 to 2038.
From 2048 to 2053 located around 2 km from the eastern end of Zini River Estate.	Views will progressively be obstructed by the construction of Sand Dump 8B (located around 2 km from this location) from 2048 to 2053, whereafter the latter will be rehabilitated.
From 2036 to 2047 located between 3.5 to 8 km from the eastern end of Zini River Estate.	Other structures that will be partially visible are the western slopes and tops of sand dumps A-2, A-3, and A-1, which will be created from 2036 to 2047 whereafter they will be rehabilitated.

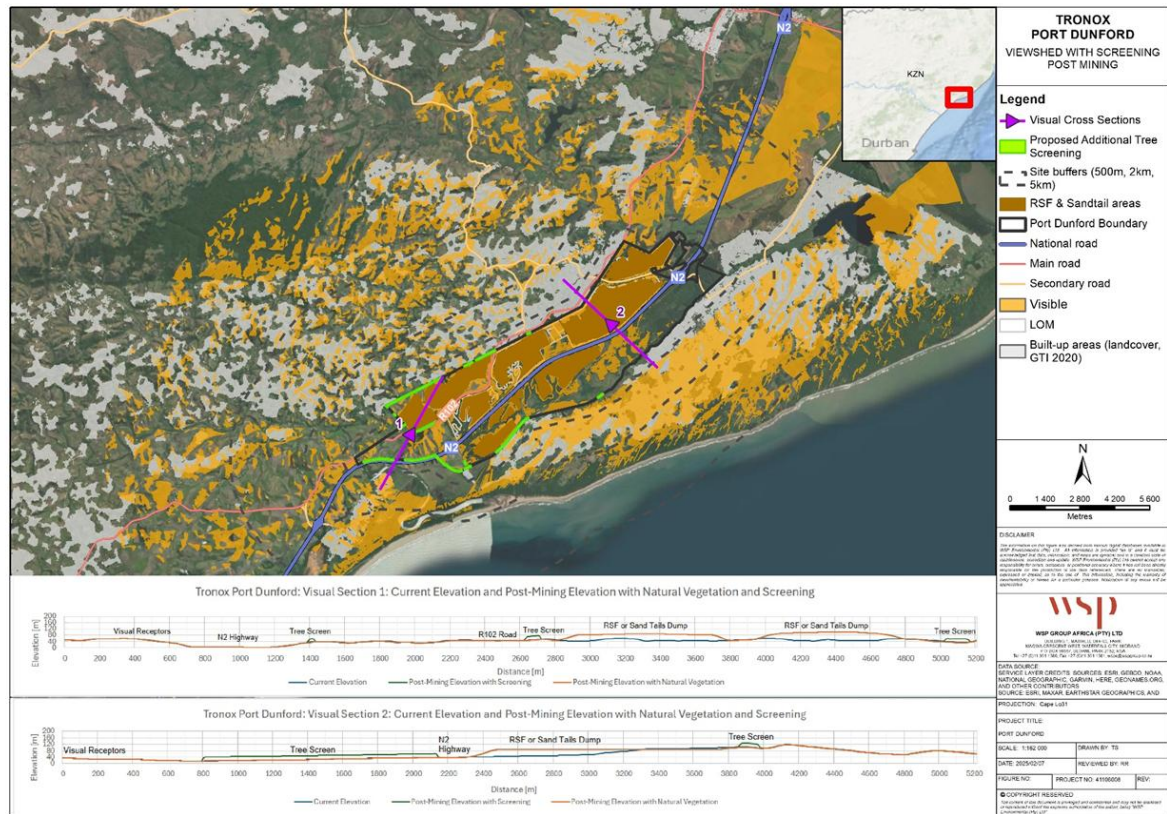
From the centre of Zini River Estate (viewpoint 2 in the Figure 8) the results are somewhat like that of viewpoint 1. However, the level of visibility of all the mining landforms will be significantly reduced due to topographical obstruction and the presence of existing buildings and vegetation and it will also be about 1 to 1.5 km further away. The PWP plant will not be visible from Zini River Estate and other establishments west of the mine. The visual impact from directly visible light sources associated with the plant is therefore expected to be limited.

The visual impact report provides a line-of-sight analysis from Mtunzini and Zini River Estates to the mine. Figures 9 and 10 below show line-of-sight section lines. The map shows, amongst others, a Section 1 through Zini Estates and the development site. The map indicates the respective distances from the site boundary at 500m, 2 km and 5 kms. Zini Estates fall outside the 500m but within the 2 km distance radius from the boundary of the development site and approximately 2.8 km from the foot of the RSF.

The line-of-sight diagramme indicates that the low existing plantation vegetation between the mine and Zini River Estate will not screen the visual impact of Sand Dump 8B. Additional screening to be planted will partially obscure the lower sections of the RSFs and/ or sand tails dumps. The addition of tree screens north of the N2 highway and along the mine boundary south of the sand dump will partially screen the dump from view. However, the addition of tree screens north of the N2 highway and along the mine boundary south of the sand dump, which will be planted approximately 6-8 years before construction of the dump, will largely screen the dump from view. As the dump progressively increase in height, the upper sections of Sand Dump 8B and a section of the top of RSF 9 will be visible for the duration of mining operations, highlighting the need for operational and post-closure rehabilitation. It is important to establish the additional tree screens as soon as feasible, so that it may provide the maximum period of screening during operations. This is especially true as areas of the dump illuminated for night-time operations would not be screened during the latter half of its use, highlighting the need for additional lighting mitigation measures.

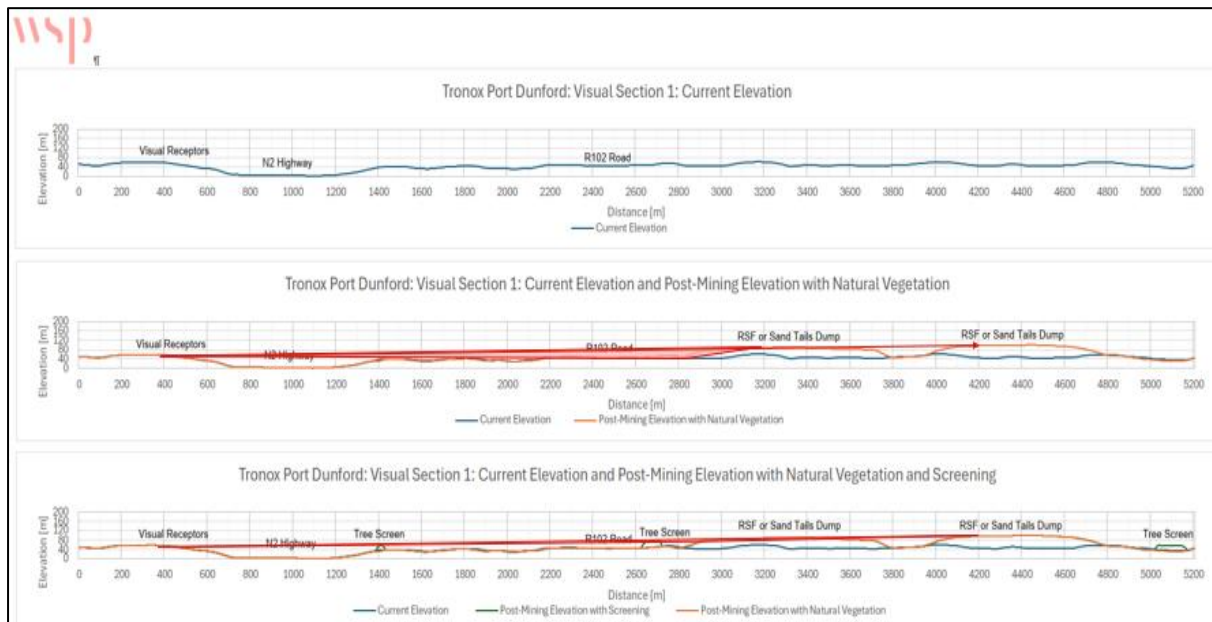
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Figure 9 Line-of-sight sections (1V:1) through the project site (post mining) with vegetation screening



Source: Figure 9-4 (WSP, February 2025)

Figure 10: Line-of-sight for Section 1 (the +1:1 vertical vs. horizontal)



Source: Figure 9-5, (WSP, February 2025)

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The results of the viewshed analysis presents a “worst-case” scenario within the context of the study area. It demonstrates the cumulative visual impact of the project over the entire lifespan of the mine (WSP, February 2025) Section 8.2.2.

PHASE 1 between 2025 and 2035:

- Presence of visually intrusive site office and laydown yard and associated night-time light pollution – the proposed mine offices and other associated infrastructure will result in the removal of, and visual contrast with, the existing timber plantations and other vegetation cover on site. However, existing smallholdings, farming, urban and industrial infrastructure within the study area is similar in appearance to that of the proposed Phase 1 mining activity, and frequently more expansive. The visual intrusiveness of this impact is therefore rates as low (1).
- Opencast mining activities (small-scale) – the proposed Phase 1 opencast mining activities will result in the sequential removal of existing vegetation cover and result in exposed areas of bare, red earth that will notably contrast with the visual surroundings. However, the extent of areas will be reduced due to concurrent backfilling and rehabilitation activities and be similar in extent to that of other existing mining activities in the study area and is therefore rated as moderately (2) intrusive.
- Haulage by road of ROM material to Fairbreeze Mine for processing – as this impact will occur along existing major and other public transport routes, the degree of visual impact is rated as low (1).

PHASE 2 from 2036/2037 until mine closure in about 2069:

- Opencast mining activities (large-scale) and associated night-time light pollution – as for Phase 1 the proposed Phase 2 opencast mining activities will result in the sequential removal of existing vegetation cover over the progressively mined parcels/mining blocks, which during mining activities will result in exposed bare areas which will contrast dramatically with the visual surroundings. Once a parcel has been completely mined out, it will thereafter be backfilled and profiled, followed by topsoiling and revegetation activities. The entire mining sequence as described will last approximately 7 years, with rehabilitation requiring a further two to three years. However, given the scale of the mining operations, the visual intrusion of the operational mining areas and associated activities is rated as high (3)
- Presence of visually intrusive PWP complex and infrastructure and associated night-time light pollution – the mining plant and associated support infrastructure will be considerably more expansive and visually complex than that of Phase 1 and will be similar in appearance to that of existing large-scale industrial operations in the study area, but less expansive. The remaining timber bands adjacent to large roads and along most sections of the mining site boundary will also serve to screen the PWP complex from most directly adjacent locations. The PWP complex is also expected to be moderately visible from the eastern part of Zini Riverview Estate but will be located around 8 km away and will therefore reduce the visual intrusion considerably. Consequently, the visual intrusion has been rated as moderate (2)
- Progressive increase in height and expansion of visually intrusive RSFs and sand tails – these artificial landforms will be tall and occupy large areas of the site, will be largely geometric in shape and/or characterised by mono-gradient slopes, and will be wholly or largely unvegetated while in

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use (Figure 8-5), for a duration of several years (ranging on around 2-11 years, depending on the facility). Consequently, the visual intrusion of these elements has been rated as high (3)

- Formation of dust plumes – dust plumes are often one of the more socially objectionable impacts associated with opencast mining, due to the associated potential health risks, nuisance factor and degradation of the visual amenity value of the surrounding landscape. By contrast, agricultural activities and other developments surrounding most mining operations do not generate large volumes of dust. However, the formation of dust plumes is likely to be of low significance and frequency within the semi-tropical context of the Port Durnford Project (WSP, 2024), compared with what would be expected in seasonally dryer environments, such as the Highveld, and has therefore been rated at most as moderately (2) intrusive, although this is likely a conservative rating
- Haulage by road of waste stream material to Port Durnford for disposal – as for Phase 1, the visual intrusion of road transport related activities of Phase 2 has been rated as low (1)
- Permanent alteration of site topography and land cover - the RSFs and permanent sand tail dumps will remain in place, but it will be shaped and revegetated. It will thus have a low intrusive value (1) after final rehabilitation and closure. Figure 8-6 shows a naturally revegetated topsoil stockpile at Fairbreeze, illustrating how plant cover significantly reduces the visual prominence of artificial mining landforms in the landscape, noting that the final Port Durnford RSFs and sand tails dumps will be less geometric in appearance than the topsoil dump depicted.

The proposed visual mitigation measures for the Phase 1 and 2 visual impacts, respectively, are presented in Table 4. Several initial and operational visual mitigation measures have been proposed including implementation and maintenance of additional tree screens mainly along the southern, western and northern mine boundary areas, reduction and optimisation of operational and security lighting, and progressive/concurrent rehabilitation where feasible. However, the most impactful visual mitigation will occur because of the closure-phase demolition and removal of the mine plant, final shaping and rehabilitation of the various mining landforms, and reinstatement of agricultural and timber land uses of the closed mine site.

Operational rehabilitation of the RSFs and sand tails dumps, which if implemented where feasible, will also contribute towards reducing the cumulative visual impact of the project during operations. These landforms will remain permanent visible features of the landscape after mine closure. However, if the mining site is appropriately rehabilitated and returned to agricultural and timber uses, the long-term/permanent cumulative visual impact of the project will be largely negligible, and thereby ensuring the pre-mining visual condition of the study area is maintained after closure.

The mitigation measures recommended by the visual impact report (WSP, February 2025) are extensive and reported in Table 9-1 of that report. The recommended mitigation measures are supported by this assessment.

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4.3.2 AIR QUALITY / DUST IMPACT⁸

The specialist air quality report identifies sensitive receptors as areas that may be impacted negatively due to air quality associated with the proposed development. Receptors were selected based on proximity to the study area and are places where sensitive individuals may be impacted, such as residences, retirement homes, schools, or medical facilities. Table 7-1 page 67 in the report lists the sensitive receptors of which Mtunzini is one recording it to be 0.7 km southwest from the boundary of the site.

4.3.2.1 Impacts during construction⁹

Construction activities at the proposed site will include various air pollution sources including earth-moving equipment (trucks, cranes, scrapers and loaders), concrete mixers and materials handling activities, among others. Due to the erratic and transient nature of such construction activities as well as the fact that detailed construction phase plans have not yet been developed for the proposed Project, air quality impacts from the construction phase of the Project could not be quantified.

All the emission sources will generate ambient air pollution and may impact on neighbouring sensitive receptors. As such, mitigation interventions are advised during the construction phase. Various mitigation techniques can be employed. These options include both management and technical options:

- Planning construction activities in consultation with local communities so that activities with the greatest potential to generate noise are planned during periods of the day that will result in least disturbance. Information regarding construction activities should be provided to all local communities. Such information includes:
 - Proposed working times.
 - Anticipated duration of activities.
 - Explanations on activities to take place and reasons for activities.
 - Contact details of a responsible person on site should complaints arise.
- When working near a potential sensitive receptor, limit the number of simultaneous activities to a minimum as far as possible.
- Identification of exposed areas not used for operations and revegetate to reduce the amount of dust available for wind entrainment.
- Ensure access control to exposed areas reducing activity and wind entrainment.
- Reduced speeds of vehicles over exposed surfaces to minimize vehicular entrainment.
- Where possible do not undertake material handling activities during windy conditions.
- Development of a dust fallout monitoring network to identify areas of concern.
- Developing a mechanism to record and respond to complaints.

⁸ WSP Group Africa (Pty) Ltd. Draft Air Quality Impact Assessment - Port Durnford Project. August 2024

⁹ Ibid. Page 73

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4.3.2.2 Impacts during operations

Given that the proposed active operational period for Phase 1 will be intermittent, for the purpose of the air quality report this scenario has been quantified, however, the emission sources have not been modelled.

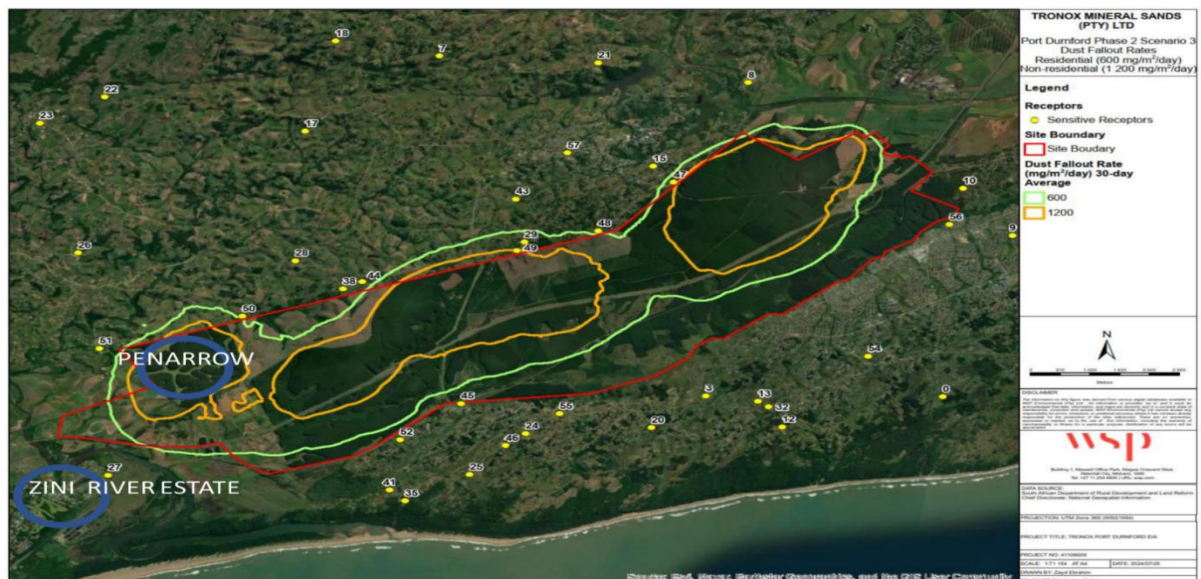
With respect to Phase 2 all scenarios were considered for the operational years indicated below:

- Phase 2 Scenario 1 (3,000 tph) Operations (2036 – 2047)
- Phase 2 Scenario 2 (3,000 tph) Operations (2048 – 2053)
- Phase 2 Scenario 3 (3,000 tph) Operations (2054 – 2069).

The research indicates that the PM_{2.5} and PM₁₀¹⁰ levels do not exceed the residential standards at Mtunzini. The highest concentrations during operations are predicted to be near the Primary Wet Plant (PWP) site, with those concentrations predicted to remain near the source and not extend past the proposed fence line, remaining below the relevant NAAQS. Notably, the maximum fence line concentrations predicted for Phase 2 are well below the NAAQS.

However, dust fallout rates for Phase 2 (all scenarios) are predicted to exceed the National Dust Control Regulations residential standard at sensitive receptors within 1 km of the site boundary. Notably, the maximum fence line concentrations exceed the non-residential standard. The predicted exceedances extend up to 500 m north-northwest and south-southwest of the proposed boundary. The nearest sources contributing to the exceedances beyond the site boundary include the sand stockpiles. Notably, Tronox propose to rehabilitate and vegetate legacy stockpiles and backfilled areas during the operational phase. Mtunzini lies beyond the 500m southwest boundary. This is shown in the following figure.

Figure 11: Scenario 3 predicted dust fallout rates



¹⁰ PM₁₀ is particulate matter 10 micrometres or less in diameter, PM_{2.5} is particulate matter 2.5 micrometres or less in diameter. PM_{2.5} is more likely to travel into and deposit on the surface of the deeper parts of the lung, while PM₁₀ is more likely to deposit on the surfaces of the larger airways of the upper region of the lung.

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The report states that, based on dust fallout results, impacts of the Phase 2 operations are predicted and dust-related complaints from receptors are anticipated. Notably the highest predicted fallout rates occur in proximity to the Primary Wet Plant and Dozer Trap Mining Units (DTMU). It is recommended that the proposed mitigation methods are adhered to, and various additional mitigation recommendations are provided in this report. It is recommended that a dust fallout monitoring network is established after commissioning of Phase 2 operations to establish dust fallout levels in the surrounding communities and identify the need for additional mitigation. If elevated air pollution levels are detected, then further mitigation measures will need to be considered. As far as Mtunzini and Zini Rive Estate are concerned, the worst-case scenario is the dust fall out rate for Scenario 3.

From an air quality perspective, it is therefore advised that the Port Durnford Project be authorised, provided mitigation measures are kept in place and dust fallout monitoring is conducted monthly during Phase 2. Given the impact of the operation of the proposed Port Durnford Mine on the surrounding ambient air quality, mitigation interventions are required. Below are mitigation interventions proposed by Tronox:

- Wetting of material prior to feeding into the DTMUs.
- Hydraulically transferred material will be deposited wet on relevant stockpiles and pits during backfilling.
- Use of water sprayers in the PWP screening and crushing processes.
- Rehabilitation and vegetation of legacy stockpiles and backfilled areas.

Additional recommended mitigation measures include:

- Identification of exposed areas not used for operations and revegetate these to reduce the amount of dust available for wind entrainment.
- Ensure access control to exposed areas reducing activity and wind entrainment.
- Reduced speeds of vehicles over exposed surfaces to minimize vehicular entrainment.
- Where possible do not undertake material handling activities during windy conditions.
- Where possible undertake dust producing activities as far as practically possible from receiving receptors.
- Development of a dust fallout monitoring network to identify areas of concern.
- Developing a mechanism to record and respond to complaints.

4.3.3 NOISE IMPACT (WSP., August 2024.)

Baseline monitoring indicated current day-time noise levels were below the suburban guideline rating level of 50 dB(A) at two of the eight receptor monitoring locations. At night, average noise levels at all the eight monitoring locations exceeded the suburban guideline rating level of 40 dB(A). From the daytime and night-time monitoring campaigns it is evident that the current noise climate surrounding the site is predominantly traffic-related, with influences from natural sources like birds and insects.

For Phase 1, day-time noise levels at all the receptor locations are predicted to remain the same, with no increases in the current baseline noise levels because of the Port Durnford Phase 1 operations. As per the SANS 10103:2008 guidelines, this will result in “little” community/group response. Highest

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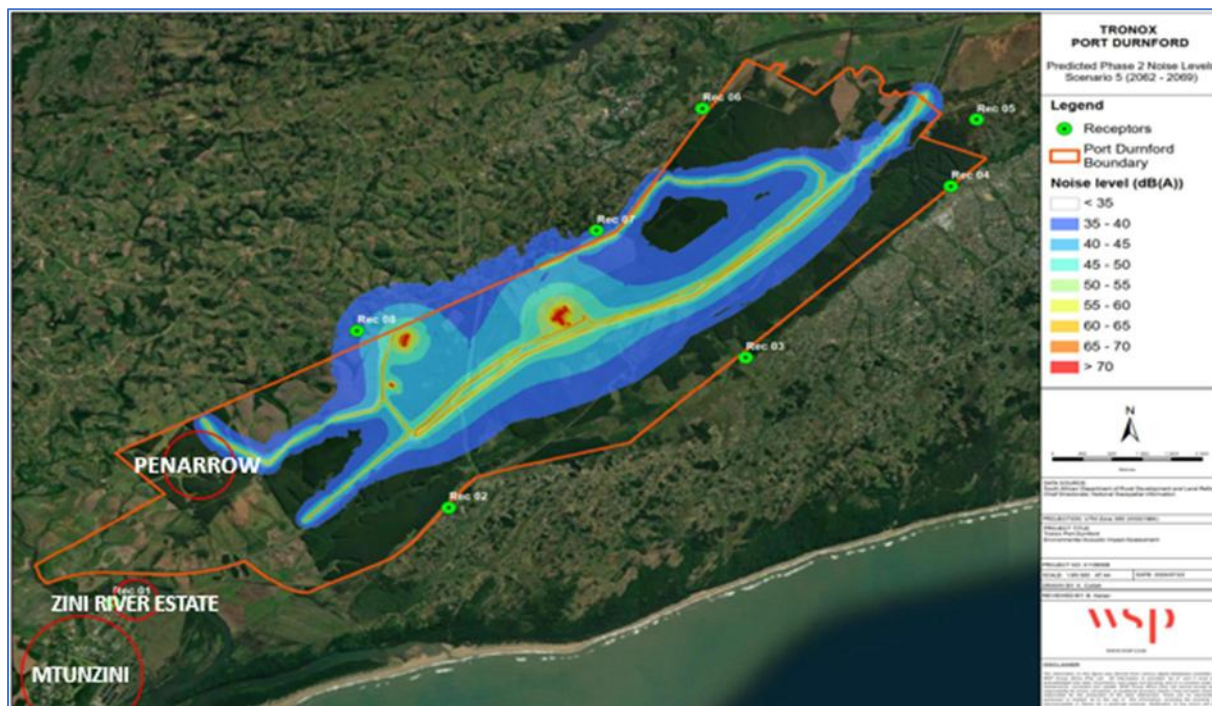
noise levels are predicted around the Phase 1 operational area. Noise levels decrease as distance from the sources increase, with levels dropping below the industrial guideline level (70 dB(A)) onsite. Offsite noise levels are below the suburban guideline level of 50 dB(A). Based on these results, acoustic impacts of the Port Durnford Phase 1 operations are not predicted and noise-related complaints from receptors are not anticipated.

For Phase 2 (all scenarios), current day-time noise levels (monitored) at three receptor locations are predicted to increase by between 0.1 and 0.9 dB(A) with the introduction of the Phase 2 mining operations. Noise levels at all other receptors are predicted to remain the same. It is noted that such increases at these three locations are well below the 7 dB(A) threshold for annoyance as per the Noise Control Regulations. Such increases are also well below the IFC threshold for annoyance of 3 dB(A).

For Phase 2 (all scenarios), current night-time noise levels (monitored) at two receptor locations are predicted to increase by between 0.1 and 0.8 dB(A) with the introduction of the Phase 2 mining operations. Noise levels at all other receptors are predicted to remain the same. It is noted that such increases at these locations are well below the 7 dB(A) threshold for annoyance as per the Noise Control Regulations. Such increases are also well below the IFC's threshold for annoyance of 3 dB(A).

The highest noise levels are predicted at the Primary Wet Plant (PWP) and at the active pit where the Dozer Trap Mining Units (DTMU) will be located. Noise levels decrease as distance from the sources increase, with levels dropping below the industrial guideline level (70 dB(A) (day) and 60 dB(A) (night)) onsite. Offsite noise levels are below the suburban guideline levels of 40 dB(A) (day) and 50 dB(A) (night).

Figure 12: Predicted noise levels during the Port Durnford Phase 2 (Scenario 5) operations



Source: (WSP Group Africa (Pty) Ltd., August 2024.)

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Based on both the day and night-time results, acoustic impacts of the Phase 2 operations are not predicted and noise-related complaints from receptors are not anticipated. As such, mitigation options are not deemed compulsory, but various mitigation recommendations are provided in this report, should the need arise. It is recommended that one round of environmental noise monitoring is conducted after commissioning of Phase 2 operations to confirm noise levels in the surrounding communities and identify the need for additional mitigation or additional monitoring campaigns. If elevated noise levels are detected, then further monitoring campaigns will need to be considered.

Based on the results of this Environmental Acoustic Impact Assessment, the significance of noise-related impacts is rated as “low” for the construction, operational and decommissioning phases of the Project.

4.3.4 TRAFFIC¹¹ IMPACT

The Run of Mine (ROM) will be transported from the mining area at Port Durnford to a Primary Wet Plant (PWP), whereafter Heavy Mineral Concentrate (HMC) will be transported to the Central Processing Complex (CPC) in Empangeni for further processing. All transport of ROM and HMC will be done by 34-ton side-tipper highway trucks.

This first phase from 2025 to 2035 entails the mining of 70,400 ROM tonnes per annum (tpa) that will be transported by ±35 heavy vehicles per day to the PWP, and after processing will form part of the HMC (tpa) that is currently transported to the CPC. The mining operations will commence in 2025, and will be operational 12 hours a day, 60 days a year (once a month for 5 days) and result in low / negligible additional peak hour traffic volumes on the external road network.

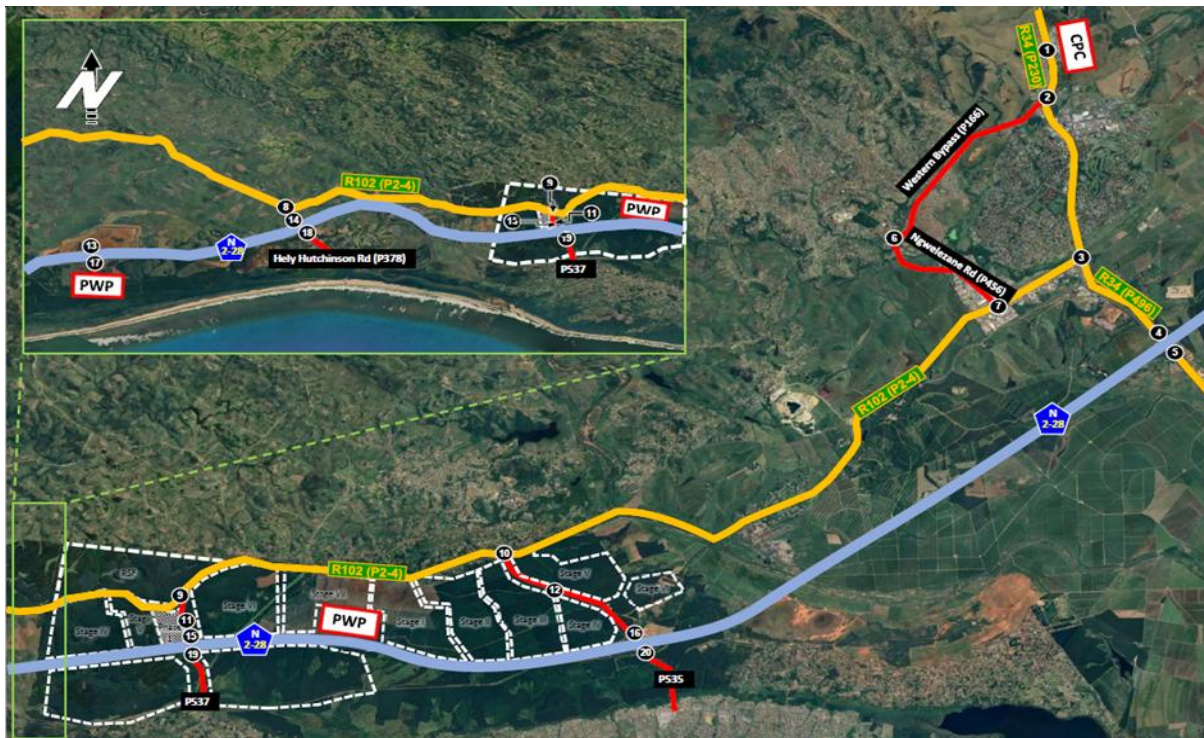
During the first phase of operations, minerals from the Port Durnford mining area will replace the existing ROM feed to the Fairbreeze PWP. Mineral output will be transported from the Port Durnford mining area utilising the R102, Helly Hutchinson Road, and the N2 to transport the ROM to the PWP at Fairbreeze.

The second phase of operations will commence in 2036 and will increase the mining output, using the full capacity of the new PWP that will be established at the Port Durnford mining area (the Fairbreeze PWP will be decommissioned at this point). Mining operations will take place in seven stages, each active for a period of 5 years from 2036 to 2069 (stage 1 being mined 2036 – 2040, stage 2 being mined 2041 – 2045, etc.). These seven mining stages will be identical in every way except the mining area, with stages 4, 5, and 6 being the only stages that are separated from the PWP by a public road, i.e. during which external traffic will be generated.

¹¹ Techworld Consulting Engineers. Traffic Impact Assessment. Tronox KZN Sands (Pty) Ltd. August 2024.

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Figure 13: Haulage roads proposed



Source: (Techworld Consulting Engineers, 2024)

Stage 5 is the critical stage as it requires the crossing of both Road P537 and Road P535 for transportation of ROM to the PWP (Stage 4 and Stage 6 will require the crossing of Road P537 and Road P535 respectively). The ROM during the peak hours for every stage of mining will be transported by ± 473 heavy vehicles to the PWP and back, crossing none or one of Road P537 or Road P535, or both roads:

- Stage 1 to Stage 3, and Stage 7 – only internal traffic from the mine to the PWP,
- Stage 4 (west of Road P537) – ± 236 vehicles/hour crossing Road P537 per direction,
- Stage 4 (east of Road P537) – only internal traffic,
- Stage 5 (west of Road P537 and east of Road P535) – ± 236 vehicles/hour crossing Road P537 and Road P535 per direction respectively,
- Stage 6 (west of Road P535) – only internal traffic,
- Stage 6 (east of Road P535) – ± 236 vehicles/hour crossing Road P535 per direction.

The expected mining volumes during the Second Phase will comprise of the mining of $\pm 26,280,000$ ROM tpa (89% efficiency will translate into $\pm 23,470,000$ tpa) that will be transported by $\pm 1,891$ daily heavy vehicles (± 473 peak hour trucks) to the PWP, and after processing $\pm 574,900$ HMC tpa that will be transported by ± 46 daily heavy vehicles (± 12 peak hour trucks) to the CPC. This phase will operate 24 hours a day, via separate shifts, 365 days per year.

The required mitigation measures for the project includes the reconstruction of the northern section of Road P537 to a design speed of 80km/h to comply with the standards of Kwa-Zulu Natal Roads Department (and realignment of the T-junction with R102) to support Phase 1 (2025), the construction of a partial interchange at the access on Road P535 and the signalization of the terminals at the P535

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/ N2 Interchange to support Phase 2 Stage 1 (2036), and the construction of a partial interchange at the access on Road P537, the reconstruction of the southern section of Road P537 to a design speed of 80km/h to comply with the standards of Kwa-Zulu Natal Roads Department, and the construction of the ramps between P537 and the N7 to support Phase 2 Stage 4 (2051).

The origins of staff members (place of residence) and contractors (place of business) are distributed between Richards Bay, Empangeni, Mtunzini, KwaGingindlovu, and Eshowe. These trips are thus expected to distribute from Road P537 and Road P535 to the R102 in the north and the N2 in the south, and then along these roads towards the west and the east. The traffic routes will not have a direct impact on the residents of Mtunzini or Zini River Estate.

Figure 14: Haulage routes in relationship to Mtunzini and Zini River Estate



Source: (WSP, 2024)

4.4 SYNOPSIS: POTENTIAL IMPACTS ON PROPERTY VALUES

Based on the preceding analysis several possible causes of impacts on property values are identified. The purpose of this section is to consolidate all the potential impacts into a high-level summary format.

Important in the identification of the impacts and in the evaluation of the impacts in a later section of the report, is the high premium that Mtunzini and Zini River Estate residents place on the eco-tourism and nature-value of area in general, and specifically on Zini River Estate. It was noted in the preceding sections that these views were expressed several times: Mtunzini is a town where few of the residents

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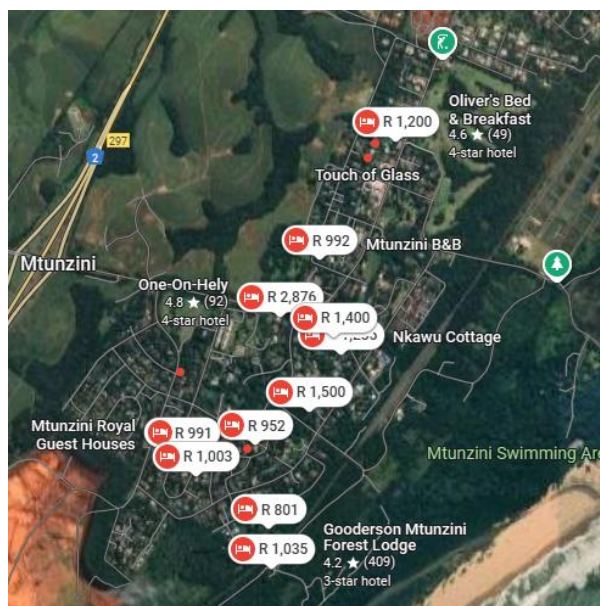
live and work. Most residents work in the broader region rather than in the town and prefer to live in Mtunzini and Zini River Estates because it “is a nice place to live”. The choice to live in Mtunzini is usually not one of convenience or cost / price but is largely a life-style choice and an important driver of the property values.

Closely related to the residential market are the tourism and hospitality accommodation places. Consisting mostly of B’nBs and guest houses, the accommodation market in Mtunzini caters to short-stay tourism and as accommodation for contract workers. The accommodation places may partially benefit from the increased employment that the mine’s development will bring but the property values will also be negatively affected by similar factors as those that impacts on the residential market¹².

Figure 15: Accommodation places in Mtunzini

The concerns of residents and stakeholders in Mtunzini and Zini River Estate have almost exclusively been focused on the impact on the residential / tourism accommodation areas and investments. Little mention was made of impacts on commercial properties, although concerns have been expressed about the impact on agricultural in the area. The value of the commercial properties is unlikely to be directly impacted by the proposed mine because:

- The value of the commercial properties is largely determined by the use value of the properties as commercial sites which is derived from the businesses that can be supported by the town’s residents. Businesses in Mtunzini by en-large provided a service to the local community and are isolated from the regional buying power which accrues to Empangeni and Richards Bay. This means that should the impact of the mine be of sufficient significance, and people migrate out of the town, then the value of the commercial properties will also be affected.
- The location of the commercial premises is such that they are out of the direct line-of-sight from the proposed mine’s intrusions.



A further aspect identified is the impact of the mine on the long-term economic development potential of the sub-region which includes new developments in- and outside of the boundaries of Mtunzini. Mention has been made of a planned new R140 million luxury residential estate which would overlook the mining area. It is stated that this development may need to be abandoned if the mine’s boundaries go up to the river and the flats.

The possible causes and impacts identified in the preceding sections are listed in the following table.

¹² It should be noted that the additional employment opportunities created by the proposed mine development are very limited.

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Table 4: Possible causes and impacts of the mine on property values.

POSSIBLE CAUSES OF IMPACT ON PROPERTY VALUES	POTENTIAL EFFECTS OF THE IMPACTS ON PROPERTY VALUES
NEGATIVE IMPACTS	
The visual and sense of place impacts are the greatest concern to residents.	Negative impact, mainly in the long term (2036 to 2069) on Zini River Estates
Dust impacts and visible dust plumes. Wind resulting in dust from the mine is a concern also from a visual impact on the residential houses and estates. When the northwest wind blows, there is a lot of dust in the residential area.	Negative impact, mainly in the long term (2036 to 2069) on Zini River Estates
Noise impacts from operations.	Negative impact possibly in the long term (2036 to 2069) on Zini River Estates
Traffic impacts. The impact of trucks movement towards the north of Empangeni are a great concern as it may impact on the residents in general	Negative impact, mainly in the long term (2036 to 2069) on Zini River Estates and Mtunzini residents in general.
Composite / Sense of place. A general undefined concern about the closeness of the project to the residential areas of Mtunzini and Zini River Estate.	An impact on the natural eco-estate character (green bush, hills, mountains, and river) of Zini River Estate. Impact on the future growth and development potential of the town. The mine is the biggest threat to the entire region, including agriculture, which may stifle the town's development potential. Negative impact of visual, dust, noise and traffic in the long term (2036 to 2069) on Mtunzini and Zini River Estates. Negative impacts until the Fairbreeze operations stops completely and the area is rehabilitated.
POSITIVE IMPACTS	
Additional employment in the area. The additional or new employment opportunities created by the mine will be very limited and is not a major factor in considering impacts on property values.	Potential increases the demand and hence the value of properties in the Mtunzini and Zini Rive Estate markets
Corporate Social Responsibility: Support that the mine provides to the town of Mtunzini such as, in the past, the laying of electricity cables and improving the water table water flow in the river.	Creating a supporting environment which makes the area more attractive for investors.

5 HISTORICAL PROPERTY MARKET TRENDS

The purpose of this section is to:

- Determine the change in historical property values (increasing or decreasing) in Mtunzini and Zini Estate over a reasonable timeframe (pre and post mining at Fairbreeze).
- Benchmarking of Mtunzini against other coastal towns along the North Coast and their property fluctuations over the same timeframe.

This section accordingly addresses the following:

- To contextualise changes in the Mtunzini property market an overview of the National and KZN property trends are provided.
- Changes in property values in Mtunzini and Zini River Estate.
- Benchmarking the property trends in Mtunzini and Zini River Estate against other coastal towns along the North Coast.

In considering property values, it must be kept in mind that property values are determined by several factors of which the general state of the economy, interest rates, household buying power, the rate of inflation, location of the property, investment perceptions and the utility or usage value of the property are all important factors. Ultimately it culminates into the demand and supply dynamics in the market which determine the value or price. As such, determining the causes of changes in property values are often complex and it becomes difficult to determine the impact of a specific event or cause of change. Under stable market conditions, relatively accurate predictions of market values can be made. However, when the market is faced by unusual changes, such as the impact of Covid-19, the KZN floods and social unrest and, in this case the introduction of the Tronox Sands mine into the Mtunzini and Zini River Estate environment, it becomes difficult to isolate the extent of the change that led to the end values.¹³

5.1 OVERVIEW: NATIONAL AND KZN PROPERTY TRENDS

The purpose of this section is to provide a brief overview of the long-term residential property market in South Africa within which to contextualise changes in the Mtunzini market. The figure below indicates that, for South Africa as a whole, residential property values have not increased significantly in real terms from about 2011 / 2012. The repeat sales house price index increased by a mere 0.6% in April 2024 and is one of the lowest year-on-year increases since 2009. In real terms, house prices have declined by 4.28% since 2009 (Global Property Guide: South Africa, 2024). The economic slowdown, higher interest rates and tougher lending criteria all led to a drop-off in the property development industry (Portfolio Property Investments, 2023).

The property market in South Africa has seen comparable growth in the coastal regions compared to the inland towns in the last decade, particularly in the Western Cape but also in KZN. Especially after Covid-19, coastal regions were seen as desirable locations with remote working becoming a reality, which can drive up demand and prices. (Portfolio Property Investments, 2023).

¹³ (Times Property, 2022) (Sotheby's, Lew Geffen, 2024) (TCI Magazine, 2019) and others.

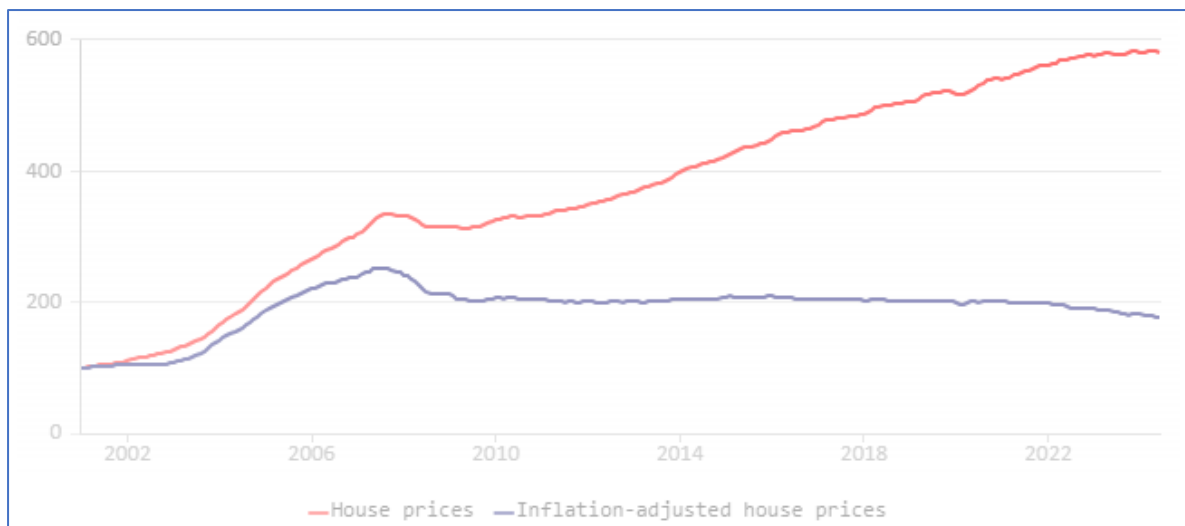
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Figure 16: South African house price annual change, 2002 to 2024



Source: (Global Property Guide: South Africa , 2024)

Figure 17: South African National House Price Index, nominal and inflation adjusted prices.

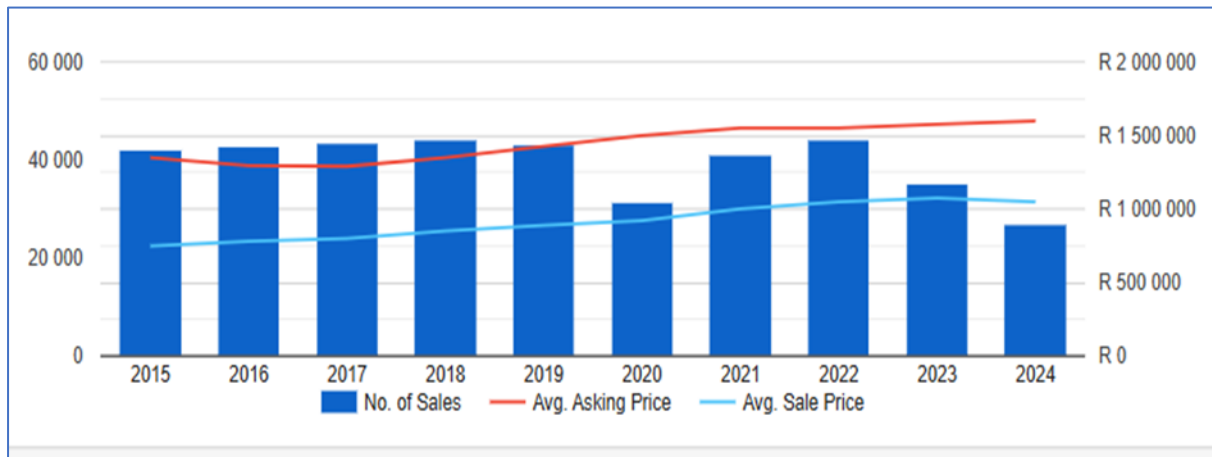


Source: (Global Property Guide: South Africa , 2024)

In KwaZulu-Natal (KZN), residential house prices have changed little in real terms over the last 9 years as shown in the diagram below. The graph shows the annual number of sales registered in the deeds office, as well as the average selling price and asking price of all Property24 listings in KZN. The average sales price of properties in 2015 was R 750 000 and in 2024 R 1 050 000, an increase of 3.8 % pa in nominal terms over the 9 years. In real terms the average property values decreased by - 1.4% pa. It should be born in mind that since 2020 the KZN economy and therefore also the property market experienced significant shocks in the form of the Covid-19 pandemic, floods in 2021 and 2022 and social unrest in 2021.

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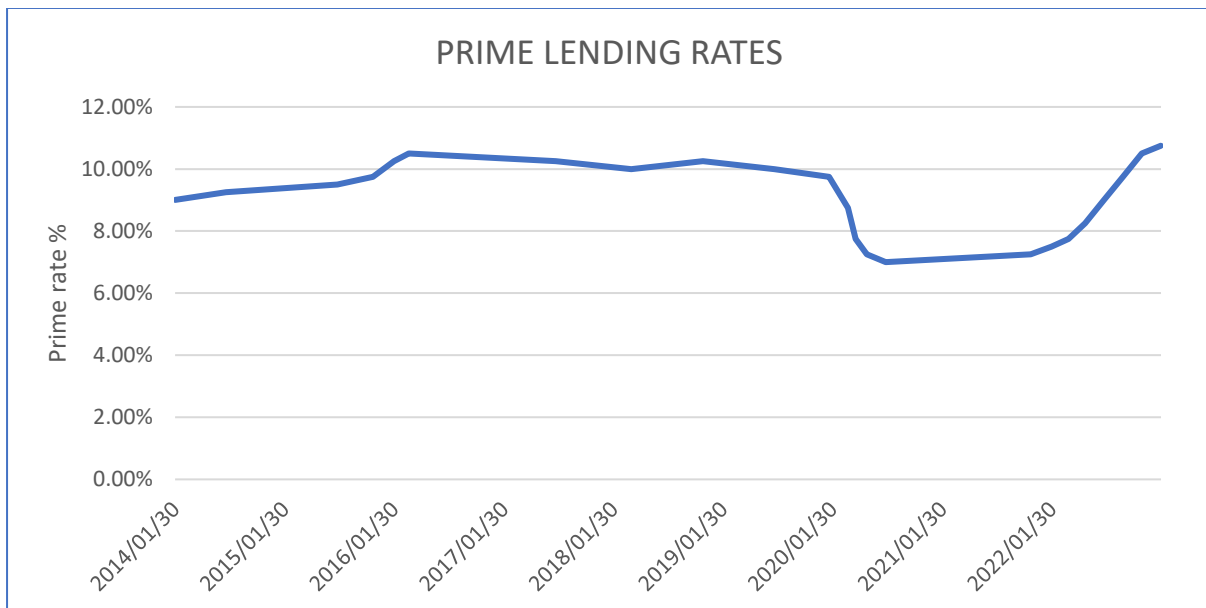
Figure 18: Property24 Annual Sale and Listing Trends in KZN, 2015 to 2024



Source: (Property24, 2024)

The following two diagrams show the fluctuations in the prime interest rate. Interest rate levels are one of the important determinants of residential demand. Important to note is that interest rates were at a comparable high from 2016 to 2020 and fell during 2020 to 2022 as part of the economic recovery strategy after the Covid-19 pandemic.

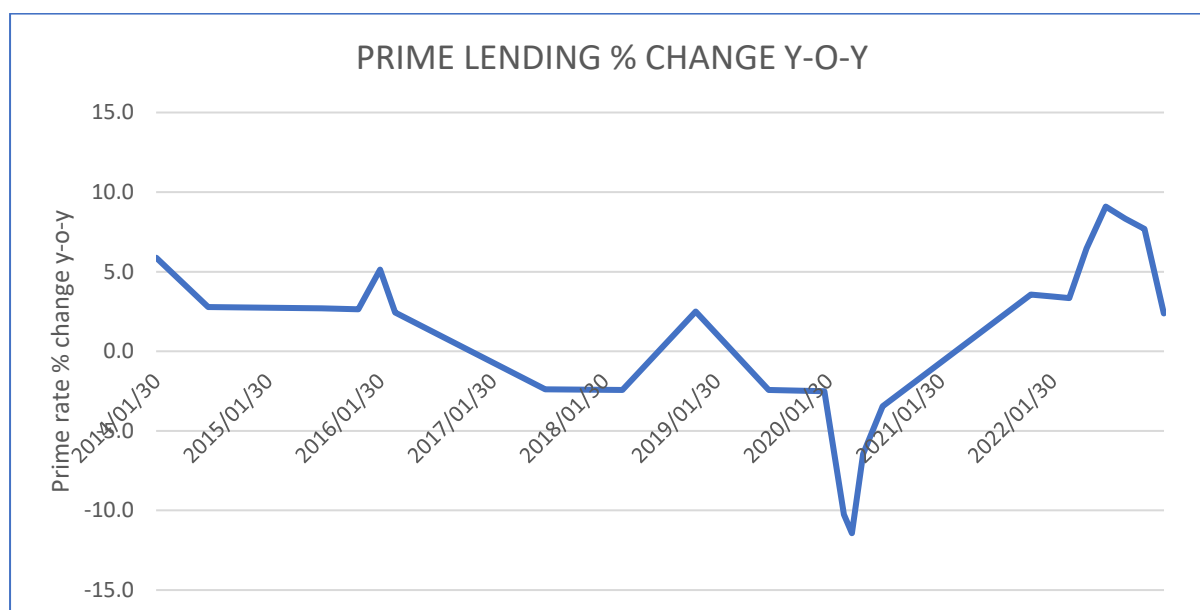
Figure 19: Prime interest rate %, 2014 to 2023



Source: FNB historical prime interest rates accessed in 2024.

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Figure 20: Year on year % change in prime interest rate



Source: FNB historical prime interest rates accessed in 2024.

5.2 MTUNZINI AND ZINI RIVER ESTATE PROPERTY TRENDS

The property trends in Mtunzini and Zini River estate is analysed in this section. A comparative analysis between Mtunzini Suburb (the “old town”), Zini River Estates and Mtunzini Town (incorporating both the Suburb, Zini Estate and surrounding areas) is done. The data used for this analysis is that Lightstone Properties which records all registered property transfers lodged in the Deeds Office. Comparative data from Property24, which records the sales prices offered and sales price achieved, has also been analysed. The results from the two sources, although slightly different, are by enlarged similar. The data for both sources are presented in Annexure A.

The following table and three diagrams show the Lightstone data for freehold, sectional title and vacant properties. With respect to freehold properties, all three localities recorded an increase in value from 2013 to 2022. Property values increased at Mtunzini Suburb, Mtunzini Town, and Zini River Estate respectively at 5.3%, 7.3% and 6.4% from 2013 to 2022. Freehold property values at Zini River Estate are on average 90% higher than that of Mtunzini Suburb. Values fluctuated over the period in all three localities with some stagnation of prices during 2018, 2019 and 2020. Prices increased after the 2020 pandemic in 2021 and 2022, partially due to the fall in interest rates. The Property24 data in Annexure A show that property values continued to increase further in 2023.

Table 5: Property sales in Mtunzini Town, Mtunzini Suburb and Zini River Estate, 2014 to 2022.

TOWN	TYPE	2014	2016	2018	2020	2022	Ave.	CAGR
Average Property Values per site, Medium Price (R'000)								
Mtunzini Suburb	Freehold	1 288	1 200	1 650	1 550	1 950	1 509	5.3
Mtunzini Town	Freehold	1 300	1 600	1 800	1 850	2 350	1 655	7.3
Zini River Estate	Freehold	3 275	2 650	3 000	3 000	3 700	2 869	6.4
Mtunzini Suburb	Sectional Title	1 200	1 010	950	1 000	1 290	1 048	1.3
Mtunzini Town	Sectional Title	1 200	1 100	800	950	1 322	1 075	1.1

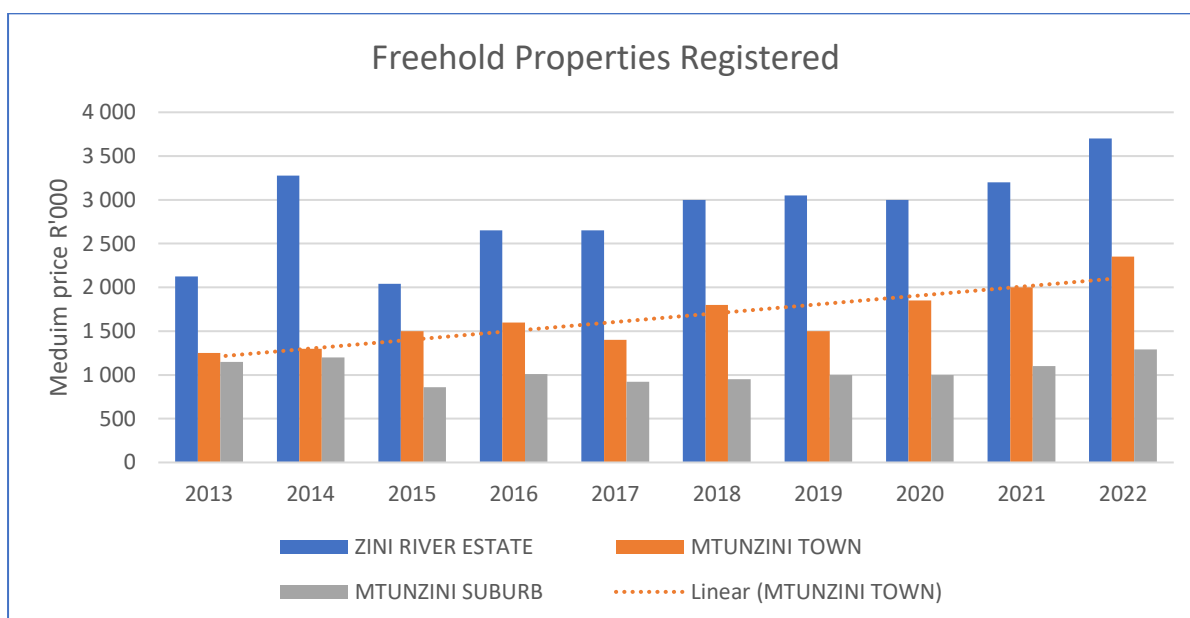
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TOWN	TYPE	2014	2016	2018	2020	2022	Ave.	CAGR
Zini River Estate	Sectional Title	1 265	1 250	180	180	1 520	928	1.8
Mtunzini Suburb	Vacant	330	420	380	565	630	454	3.8
Mtunzini Town	Vacant	396	585	645	571	650	569	4.8
Zini River Estate	Vacant	408	591	1 500	578	660	659	5.7
No of Title Deed Registrations							Average	
Mtunzini Suburb	Freehold	26	21	16	31	27	29	
Mtunzini Town	Freehold	28	33	17	42	38	35	
Zini River Estate	Freehold	2	12	1	11	11	6	
Mtunzini Suburb	Sectional Title	13	14	13	23	21	19	
Mtunzini Town	Sectional Title	23	21	29	34	30	29	
Zini River Estate	Sectional Title	10	7	16	11	9	11	
Mtunzini Suburb	Vacant	3	5	3	3	5	5	
Mtunzini Town	Vacant	20	45	14	28	35	31	
Zini River Estate	Vacant	17	42	11	25	30	26	

(Lightstone Property , 2023). Note: only every 2nd year is shown in the table – see Annexure A for the full data set.

One of the reasons why property values stagnated and even fell in 2018 is because the Fairbreeze mining operation south of Mtunzini, started in earnest. However, it should also be noted that 2018 was a year of exceptional political upheaval and uncertainty which may have impacted on property values when a transition of power took place within the ruling political party of the country.

Figure 21: Comparative analysis of freehold property prices in Mtunzini, Mtunzini Suburb and Zini River Estates, 2013 to 2022, Rand Million.



(Lightstone Property , 2023)

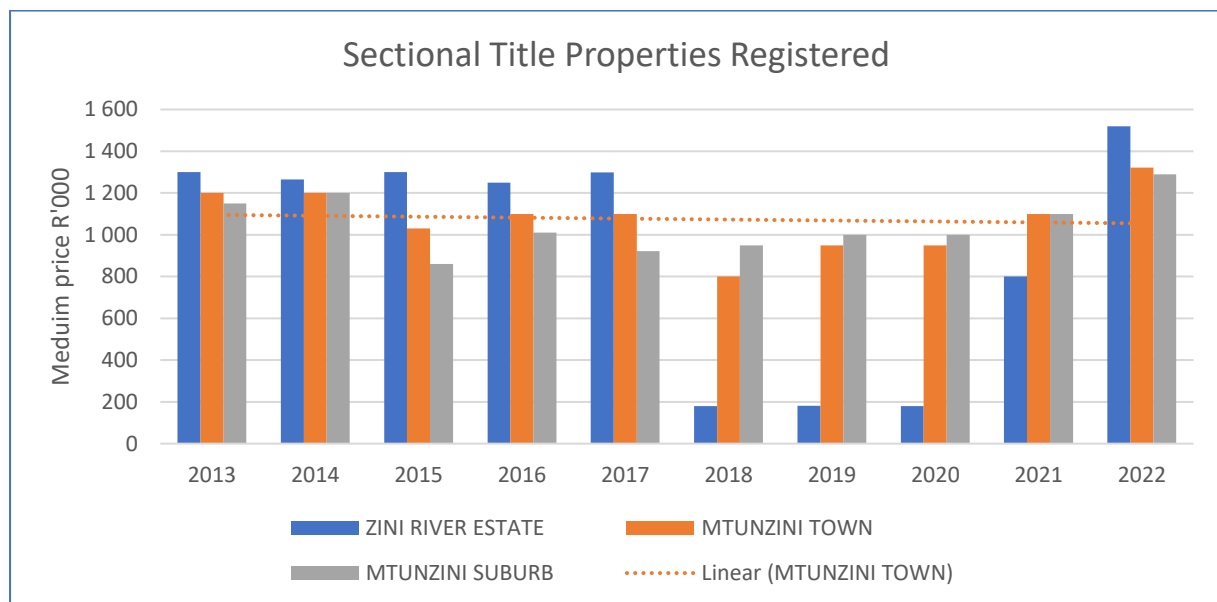
Note: the trend line is for Mtunzini Town.

The sectional title analysis shows that values in Zini River Estate is substantially lower than those of Mtunzini Town and Suburb. This is mainly due to the low values recorded for 2018, 2019 and 2020.

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The average value of Zini River Estate sectional title properties over the period is R 928 while it is R 1 048 for Mtunzini Suburb¹⁴. By 2022 sectional title properties in Zini Estate is again higher than that of Mtunzini Town and Suburb like it was before 2018. The increase in value is lower in all three the localities compared to the freehold properties having increase on average by 1.4% pa over the period. Noticeable is the overall fall-off in property registrations for 2018, 2019 and 2020, before starting to recover in 2021 and 2022. Interestingly, sectional title property values in Mtunzini Suburb were higher in 2018, 2019 and 2020 compared to Mtunzini Town which is different from any of the other years. The Property24 data in Annexure A show that sectional title values continued to increase in 2023.

Figure 22: Comparative analysis of Sectional Title property prices in Mtunzini, Mtunzini Suburb and Zini River Estates, 2013 to 2022.



(Lightstone Property , 2023)

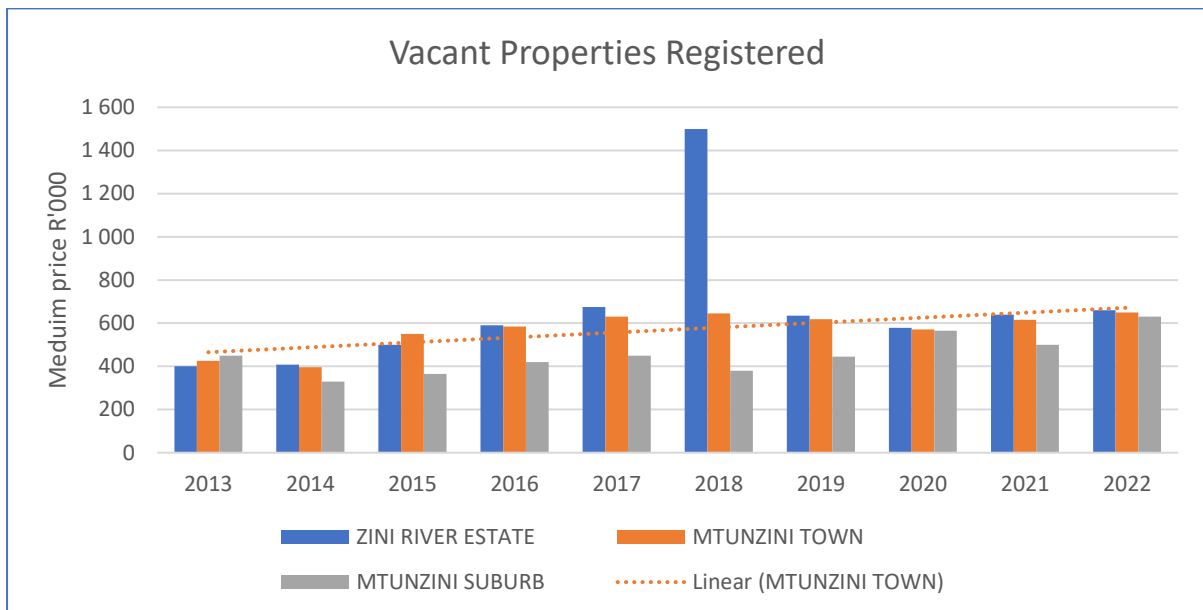
Note: the trend line is for Mtunzini Town.

The diagram below shows the property value trends for vacant properties. Immediately noticeable is the outlier value for Zini River Estates in 2018. Ignoring the exceptional high 2018 Zini Estate value, vacant property values increased across the board at an average rate of 4.8% from 2013 to 2022. However, vacant property values also in this case stagnated and fell-off during 2018, 2019 and 2020.

¹⁴ Average sectional title values in Zini River Estate before 2018 was R 1 283 000.

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Figure 23: Comparative analysis of vacant property prices in Mtunzini, Mtunzini Suburb and Zini River Estates, 2013 to 2022.



(Lightstone Property , 2023)

In summary, the Property24 data provides a summary total for all properties including freehold, sectional title and vacant properties as shown in the following graph (the supporting data is shown in Annexure A). The Property24 data show that there has been an overall fall in property values from 2016, with 2021 being an exceptionally high value year. The information shows the following trends for all properties:

Average Sales Price from 2015 to 2023, all properties.	R1 159 111
CAGR: number of properties 2015 to 2023 sold	-6.6 % pa
CAGR: Average Sales Price 2015 to 2023 sold	5.7% pa
CAGR in real terms: Average Sales Price 2015 to 2023 sold	0.3% pa

Source: Property24, 2024

Figure 24: Average Sales Price from 2015 to 2023, all properties in Mtunzini including Zini River Estate.



Source: Property24, 2024

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5.3 BENCHMARKING AGAINST OTHER COASTAL TOWNS

In this section the property values and number of sales in Mtunzini is compared to the trends in other northern KZN coastal towns. The following two tables show the average values of property sales and number of sales as recorded in the Property24 data tables for the selected towns. Annexure B contains the full database of property values for all the coastal towns.

Table 6 Comparative prices of all property sales in northern KZN coastal towns.

AVERAGE SALES PRICE RM	2014	2015	2016	2017	2018	2019	2020	2021	2022	CAGR %	Ave.
Mtunzini	1.00	0.95	0.92	1.07	1.06	1.05	1.25	1.36	1.28	2.78	1.10
St Lucia	1.00	1.07	1.20	0.90	0.87	0.84	1.10	1.00	1.18	1.86	1.02
Thukela Mouth	0.00	0.65	0.65	0.00	0.70	0.68	0.85	1.09	1.55	na	na
Zinkwazi Beach	1.75	1.82	1.50	1.72	2.03	1.95	2.05	2.26	2.46	3.86	1.95
Tinley Manor	1.17	1.45	1.10	1.53	1.50	1.40	0.97	1.57	1.45	2.41	1.35
Salt Rock	1.90	2.30	2.13	2.70	2.97	2.40	2.50	2.50	3.18	5.87	2.51
Shakas Rock	1.80	2.10	1.87	2.15	2.40	2.10	2.20	2.60	2.87	5.32	2.23
Ballito	1.55	1.80	1.85	2.10	2.27	1.94	2.20	2.20	2.30	4.48	2.02
Average: Coastal towns excluding Mtunzini and Zini	1.31	1.60	1.47	1.59	1.82	1.62	1.70	1.89	2.14	5.61	1.68

Source: (Property24, 2024)

Table 7 Comparative number of all property sales in northern KZN coastal towns.

NUMBER OF PROPERTIES SOLD	2014	2015	2016	2017	2018	2019	2020	2021	2022	Ave. pa
Mtunzini	110	180	140	117	105	98	110	171	112	127
St Lucia	45	61	32	38	86	35	30	66	41	48
Thukela Mouth	0	3	2	0	2	3	3	11	4	3
Zinkwazi Beach	40	45	60	49	54	44	32	43	48	46
Tinley Manor	16	15	17	12	15	14	6	27	21	16
Salt Rock	50	45	33	43	34	27	28	49	41	39
Shakas Rock	173	103	104	99	134	91	95	136	111	116
Ballito	2049	2195	2069	1871	1917	2503	1586	2448	2884	2 169

Source: (Property24, 2024)

The following figures summarise and illuminate the data in the preceding table. Except for St Lucia, all the other coastal towns are to the south of Mtunzini and therefore closer to eThekweni and King Shaka International Airport. This may account for the fact that the towns to the south's property values are higher than that of Mtunzini and St Lucia's values lower.

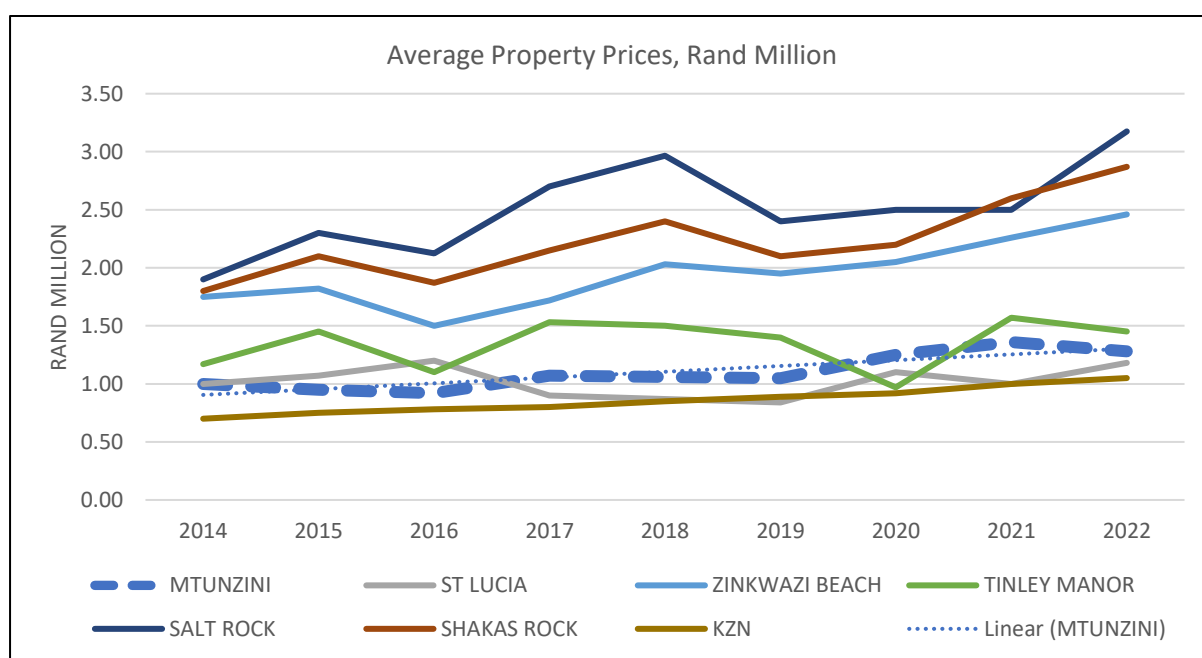
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Table 8: Summary table of CAGR % and average values compared to Mtunzini, 2014 to 2022.

TOWN	CAGR % 2014 to 2022		Ave. value 2014 to 2022	
	% pa	Higher / Lower than Mtunzini	R' Million	Higher / Lower than Mtunzini
Mtunzini	2.78	-	1.10	-
St Lucia	1.86	Lower	1.02	Lower
Zinkwazi Beach	3.86	Lower	1.95	Higher
Tinley Manor	2.41	Lower	1.35	Higher
Salt Rock	5.87	Higher	2.51	Higher
Shakas Rock	5.32	Higher	2.23	Higher
Ballito	4.48	Higher	2.02	Higher
Average: Other Coastal towns	5.61	Higher	1.68	Higher

Source: Derived from (Property24, 2024)

Figure 25: Average sales price of properties in comparable coastal towns, 2014 to 2022

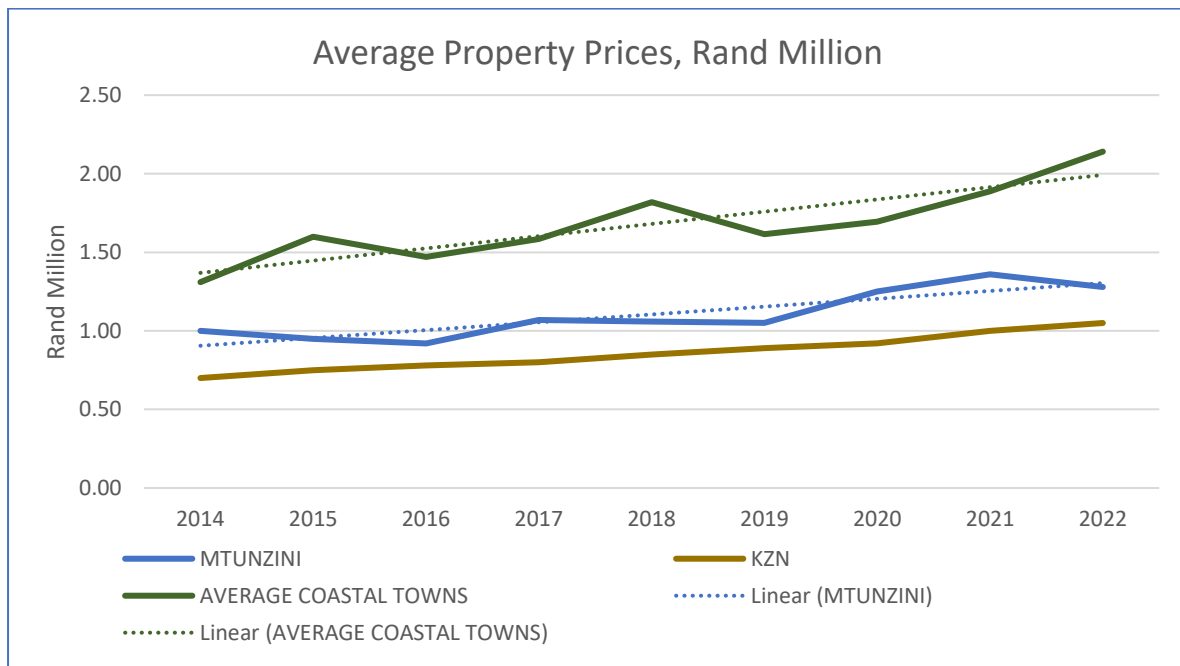


Source: (Property24, 2024) Note: The trendline is for Mtunzini

All the towns show that property values increased from 2014 to 2022. Although there are considerable fluctuations in the values over the years in each of the towns, the towns generally show that there has been a decline in values in 2019 and 2020, with some recovery after the 2020 Covid-19 impacts. The fall in property values is underscored by the number of properties sold as shown in the next diagram. From this analysis it is concluded that the fall in values between 2018 and 2020 shown in the Mtunzini analysis, may have been due factors other than the Fairbreeze impact, such as the political-economic uncertainties caused by the transition of leadership within the ruling party.

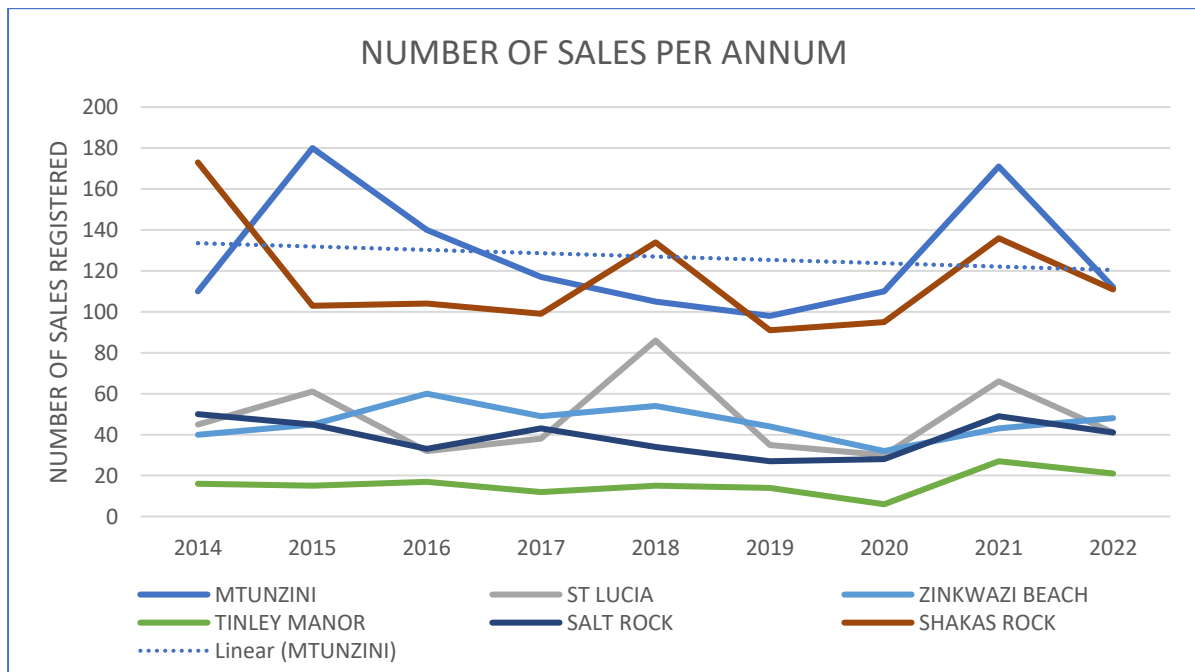
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Figure 26: Average property prices in Mtunzini and other comparable coastal towns



Source: (Property24, 2024)

Figure 27: Number of property sales in comparable coastal towns, 2014 to 2022



Source: (Property24, 2024). Note: The trendline is for Mtunzini

5.4 SUMMARY: PROPERTY TRENDS

The following main property trends have been identified from the preceding value and number of sales statistics.

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- Property values and number of sales increased in all the northern KZN coastal towns including Mtunzini between 2014 and 2022.
- Property values in the coastal towns to the south of Mtunzini are generally higher than in Mtunzini.
- Property values in the coastal towns stagnated and even fell during 2019 and 2020. In Mtunzini the fall-off in values took place from 2018 to 2020.
- Determining the factors that contributed to the fall in prices are complex and not easily isolated. Interest rates were relatively high from 2016 till 2020 when the post-Covid economic recovery strategy of government kicked in. 2018 saw significant political-economic uncertainties due to the transition of political leadership within the ruling party.
- In Mtunzini, the operations of Fairbreeze on the south of the town started in earnest in 2018 and may have contributed to the fall in prices in Mtunzini in that year. However, the level of the mining intensity increased since 2018 and the impact in 2024 is now higher than before, yet property values recovered during 2021 and thereafter, which is the same trend experienced in the other coastal towns.
- From the above it is concluded that Fairbreeze may have had an impact on Mtunzini property values. It appears from the analysis that the impact was of a relatively short-term nature and that the markets largely recovered by 2021.

6 EVALUATION OF THE POTENTIAL IMPACTS ON PROPERTY VALUES

The purpose of this section is to evaluate the nature, extent, duration and significance of the potential impacts identified. The impacts are evaluated in the following subsections in accordance with the scoring system outlined in Section One. Due to the long-term nature of the impacts and the different levels of mining operation in Phases 1 and 2, they are assessed separately in the following subsections.

The positive and negative causes of the impacts identified through the previous research are:

- Positive impacts due to additional employment opportunities.
- Positive impacts due to Corporate Social Responsibility actions of the mine.
- Negative Visual impacts
- Negative Atmospheric or dust impacts
- Negative Acoustics or noise impacts
- Negative Traffic impacts
- Negative Cumulative impacts due to 1) all the above impacts occurring at the same time and 2) the dual impact of Fairbreeze and the Port Durnford mining operations on Mtunzini.
- Average weighted negative impacts based on the number of years per phase.

It is assumed that all mitigations recommended in the specialist reports will be implemented.

The evaluation of the impacts is shown in Table 10.

6.1 POSITIVE IMPACTS: EMPLOYMENT AND CORPORATE SOCIAL RESPONSIBILITY

POSSIBLE CAUSES OF IMPACT ON PROPERTY VALUES	POTENTIAL IMPACTS ON PROPERTY VALUES
Refer to Section 4.1	
Additional employment in the area.	Potential increases the demand and hence the value of properties in the Mtunzini and Zini Rive Estate may increase. The accommodation facilities in Mtunzini may benefit by providing accommodation to contract workers. The additional or new employment opportunities created by the mine will be very limited and is not a major factor in considering impacts on property values (see the levels of new employment creation in Section Two).
Corporate Social Responsibility: Support that the mine provides to the town of Mtunzini such as, in the past, the laying of electricity cables and improving the water table flow in the river.	Creating a supporting bio-physical environment which makes the area more attractive to investors. The nature and extent of the actual benefits that may accrue to the town is not know at this stage.

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6.2 VISUAL IMPACT – NEGATIVE

POSSIBLE CAUSES OF IMPACT ON PROPERTY VALUES	POTENTIAL IMPACTS ON PROPERTY VALUES
Refer to Section 4.3.1	
<p>The visual and sense of place impacts are the greatest concern to residents.</p> <p>The specialist report identifies the visual impact as Low during Phase 1 and High during Phase 2.</p>	<p>Negative impact, mainly in the long term (2036 to 2069) on Zini River Estates.</p> <p>The long time (2036 to 2069) before the impacts will be experienced increases property investment uncertainties and hence the risk or impact effects on property values.</p>

6.3 ATMOSPHERIC / DUST IMPACT – NEGATIVE

POSSIBLE CAUSES OF IMPACT ON PROPERTY VALUES	POTENTIAL IMPACTS ON PROPERTY VALUES
Refer to Section 4.3.2	
<p>Atmospheric Dust impacts and visible dust plumes. Wind resulting in dust from the mine is a concern also from a visual impact on the residential houses and estates. When the Northwest wind blows, there is a lot of dust in the residential area.</p> <p>The specialist report notes that dust fallout rates for Phase 2 (all scenarios) are predicted to exceed the National Dust Control Regulations residential standard at sensitive receptors within 1 km of the site boundary. As far as Mtunzini and Zini River Estate is concerned, the worst-case scenario is the dust fall out rate for Scenario 3.</p>	<p>Zini River Estate is located about 2km SW of stockpile 8. This stockpile will be created and be exposed between 2048-53. The impact from this activity will only be for 5 years, thereafter, following rehab, it should not produce much Dust fallout. Although only for 5 years, the longtime (2048-53) before the impacts will be experienced increases property investment uncertainties and hence the risk or impact effects on property values. The next nearest mining infrastructure is Stockpile A2 that will be stockpiled between 2034-36.</p>

6.4 NOISE IMPACT – NEGATIVE

POSSIBLE CAUSES OF IMPACT ON PROPERTY VALUES	POTENTIAL IMPACTS ON PROPERTY VALUES
Refer to Section 4.3.3	
<p>Noise impacts from operations. The specialist report states that for Phase 1, day-time noise levels at all the receptor locations are predicted to remain the same, with no increases in the current baseline noise levels because of the Port Durnford Phase 1 operations.</p> <p>For Phase 2 (all scenarios), current night-time noise levels (monitored) at two receptor locations are predicted to increase by between 0.1 and 0.8 dB(A) with the introduction of the Phase 2 mining operations. Noise levels at all other receptors are predicted to remain the same. It is noted that such increases at these</p>	<p>Negative impact possibly in the long term (2036 to 2069) on Zini River Estates.</p>

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POSSIBLE CAUSES OF IMPACT ON PROPERTY VALUES	POTENTIAL IMPACTS ON PROPERTY VALUES
Refer to Section 4.3.3	
locations are well below the 7 dB(A) threshold for annoyance as per the Noise Control Regulations. Such increases are also well below the IFC's threshold for annoyance of 3 dB(A). Based on the results of this Environmental Acoustic Impact Assessment, the significance of noise-related impacts is rated as "low" for the construction, operational and decommissioning phases of the Project.	

6.5 TRAFFIC IMPACT – NEGATIVE

POSSIBLE CAUSES OF IMPACT ON PROPERTY VALUES	POTENTIAL IMPACTS ON PROPERTY VALUES
Refer to Section 4.3.4	
<p>Traffic impacts. The impact of trucks movement towards the north of Empangeni are a great concern as it may impact on the residents in general.</p> <p>The specialist report states that the mining operations will commence in 2025, and will be operational 12 hours a day, 60 days a year (once a month for 5 days) and result in low / negligible additional peak hour traffic volumes on the external road network.</p> <p>The second phase of operations will commence in 2036 and will increase the mining output, using the full capacity of the new PWP that will be established at the Port Durnford mining area (the Fairbreeze PWP will be decommissioned at this point).</p>	<p>Limited to no negative impact and then mainly in the long term (2036 to 2069) on Zini River Estates and Mtunzini residents in general.</p> <p>The overall traffic impact on property values in Mtunzini is assessed to be very low to low.</p>

6.6 CUMULATIVE IMPACT – NEGATIVE

POSSIBLE CAUSES OF IMPACT ON PROPERTY VALUES	POTENTIAL IMPACTS ON PROPERTY VALUES
<p>Cumulative impacts Sense of place: A general undefined concern about the closeness of the project to the residential areas of Mtunzini and Zini River Estate.</p> <p>Cumulative impacts of visual, dust, noise and traffic.</p> <p>Cumulative impact due to the overlap of Fairbreeze and Phase 1 of Port Durnford on Mtunzini and Zini River Estate.</p>	<p>An impact on the natural eco-estate character (green bush, hills, mountains, and river) of Zini River Estate.</p> <p>Impact on the future growth and development potential of the town. The mine is the biggest threat to the town, including agriculture, which may stifle the town's development potential.</p> <p>Fairbreeze operations continues during Phase 1 and combined with the sensitive eco-tourism nature of the area completely and the area may have a cumulative impact on property values.</p>

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POSSIBLE CAUSES OF IMPACT ON PROPERTY VALUES	POTENTIAL IMPACTS ON PROPERTY VALUES
	<p>Negative impact of visual, dust, noise and traffic in the long term (2036 to 2069) on Mtunzini and Zini River Estates.</p> <p>The long time (2036 to 2069) before the impacts will be experienced increases property investment uncertainties and hence the risk or impact effects on property values.</p>

6.7 SUMMARY OF NEGATIVE IMPACTS

The assessed positive impacts of the mine on property values are very low and not accounted for in this assessment. The table overleaf show a comprehensive table with all negative impact ratings for both project phases, with and without mitigations.

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Table 9: Comprehensive table with all impact ratings for both project phases with and without mitigations

Impact number	Aspect	Description	Stage	Character	Ease of Mitigation	Pre-Mitigation							Post-Mitigation						
						(M+)	E+	R+	D)x	P=	S	Rating	(M+)	E+	R+	D)x	P=	S	Rating
Impact 1:	Property	Additional employment Phase 1 2025 to 2035	Construction and operation	Positive	Easy	1	1	1	1	5	20	P2	1	1	1	1	5	20	P2
Significance						P2 - Low							P4 -High						
Impact 2:	Property	Additional employment Phase 2 2036 to 2069	Construction and operation	Positive	Easy	2	1	1	1	5	25	P2	2	1	1	1	5	25	P2
Significance						P2 - Low							P3 - Moderate						
Impact 3:	Property	Corporate Social Responsibility Phase 1 2025 to 2035	Construction and operation	Positive	Easy	2	1	1	1	3	15	P1	2	1	1	1	3	15	P1
Significance						P1 - Very Low							P3 - Moderate						
Impact 4:	Property	Corporate Social Responsibility Phase 2 2036 to 2069	Construction and operation	Positive	Moderate	2	1	1	1	3	15	P1	2	1	1	1	3	15	P1
Significance						P1 - Very Low							P4 -High						
Impact 5:	Property	Visual Impact Phase 1 2025 to 2035	Construction and operation	Negative	Moderate	2	2	3	3	3	30	N2	2	2	3	3	3	30	N2
Significance						N2 - Low							N2 - Low						
Impact 6:	Property	Visual Impact Phase 2 2036 to 2069	Construction and operation	Negative	Moderate	4	4	3	5	4	64	N4	4	4	3	4	4	60	N3
Significance						N4 - High							N3 - Moderate						
Impact 7:	Property	Atmospheric / Dust Impact Phase 1 2025 to 2035	Construction and operation	Negative	Difficult	2	2	3	3	3	30	N2	2	2	3	3	3	30	N2
Significance						N2 - Low							N3 - Moderate						
Impact 8:	Property	Atmospheric / Dust Impact Phase 2 2036 to 2069	Construction and operation	Negative	Difficult	4	4	3	5	4	64	N4	4	4	3	5	4	64	N4
Significance						N4 - High							N3 - Moderate						
Impact 9:	Property	Noice Impact Phase 1 2025 to 2035	Construction and operation	Negative	Moderate	2	2	3	3	3	30	N2	2	2	3	3	3	30	N2
Significance						N2 - Low							N3 - Moderate						
Impact 10:	Property	Noise Impact Phase 2 2036 to 2069	Construction and operation	Negative	Moderate	2	2	3	3	3	30	N2	2	2	3	3	3	30	N2

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Impact number	Aspect	Description	Stage	Character	Ease of Mitigation	Pre-Mitigation							Post-Mitigation						
						(M+	E+	R+	D)x	P=	S	Rating	(M+	E+	R+	D)x	P=	S	Rating
Significance						N2 - Low							N3 - Moderate						
Impact 11:	Property	Traffic Impact Phase 1 2025 to 2035	Construction and operation	Negative	Easy	1	1	3	1	2	12	N1	1	1	3	1	2	12	N1
Significance						N1 - Very Low							N1 - Very Low						
Impact 12:	Property	Traffic Impact Phase 2 2036 to 2069	Construction and operation	Negative	Moderate	2	2	3	1	3	24	N2	2	2	3	1	3	24	N2
Significance						N2 - Low							N2 - Low						
Impact 13:	Property	Cumulative / Sense of place Impact Phase 1 2025 to 2035	Construction and operation	Negative		3	2	3	3	3	33	N3	2	2	3	2	3	27	N2
Significance						N3 - Moderate							N2 - Low						
Impact 14:	Property	Cumulative / Sence of place Impact Phase 2 2036 to 2069	Construction and operation	Negative		3	2	3	3	3	33	N3	3	2	3	3	3	33	N3
Significance						N3 - Moderate							N3 - Moderate						

7 CONCLUSION AND RECOMMENDATION WITH MITIGATIONS

7.1 CONCLUDING SUMMARY

Based on the analysis of the causes and their impacts, taking account of the sensitivity of the Mtunzini property market and the special eco-tourism nature of the area within which Mtunzini is located, given the cumulative impact of Fairbreeze and the proposed Port Durnford mine, and noting the assessed impacts of the specialist reports, the impact of the proposed mine during the first 10-years of Phase 1, the impact on the Mtunzini property values is assessed to be Medium without mitigation. The impact of the longer-term Phase 2 of the mine from 2036 to 2069 is assessed to be Medium with and without mitigation. Important in this respect are the cumulative visual, dust impacts on property values and the uncertainties created due to the long-term nature of the project, increases the risk of property investments and hence the negative impact on property values in the longer term.

Since the duration and level of intensity of the Phase 2 impacts are significantly higher than the duration and significance of the Phase 1 impacts, it is necessary to weight the outcome. The weighted assessment considers the number of years of each of the phases where Phase 1 will last for 10 years and Phase 2 for 33 years. This is shown in the table below which provides a high-level summary of the significance of the impacts on property values for each of the impacts. Based on the analysis in this report and in considering the findings of the bio-physical specialist report, the property value impact assessment is summarised in the following table. The overall weighted assessment of all the causes of impacts on property values is assessed to be Medium.

7.2 RECOMMENDATION

The impact of the mine on the property values of Mtunzini does not present a fatal flaw to the mine and it may continue to be implemented. The impacts of the mine on the property values are, however, important and attention must be given to the implementation of the mitigations recommended in the various specialist reports.

In the shorter 10-year Phase 1 of the mine, it is assessed that the cumulative impact of the mine on the property values will be Medium without mitigations. The cumulative impact takes account of the fact that Fairbreeze will still operate during this time. It is assessed that the impact of Phase 1 of the mine on the property values will be Low with mitigations. The longer-term Phase two impact, due to the higher level of intensity of the mining operations, and fact that it will continue to operate for 33 years, scores a Medium impact on property values with and without mitigations.

7.3 MITIGATIONS

The impact of the proposed Port Durnford mine on property values in Mtunzini and Zini River Estate relate mainly to the cumulative long-term uncertainties created by the real and perceived visual, air quality / dust and noise impacts of the project. Therefore, the mitigation actions to reduce the impact of the Port Durnford mine project on property market values in Mtunzini and Zini River Estate, are twofold.

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Firstly, the mitigations recommended by the specialist visual, air quality and noise reports are important and must be adhered to. The implementation of those mitigations will address some of the direct, real and perceived, negative impacts of the mine project on property values.

Secondly, in addition to the mitigations recommended by the specialist reports, pro-active interventions must be implemented to improve the negative market perceptions that the project have and, to assist in building out nature-based and eco-tourism development dimensions of Mtunzini and Zini River Estates. Thus, to offset the negative market impacts it is recommended that the following actions be undertaken:

- The mine is to continue with the already existing liaison and coordination meetings between the mine and the Mtunzini and Zini River Estate residents. This should take on the form of regular quarterly or bi-annual meetings between the mine and the residents' associations. The purpose of the meetings will be to ensure that communication lines between the parties remain open, that regular feedback is provided to the communities and that an incidence report of impacts of the mine actions on Mtunzini and Zini River Estate are maintained and actioned.
- The mine is to use part of their social responsibility budget to facilitate and support the development and enhancing of eco-tourism and nature-based attractions and facilities in Mtunzini. Eco-tourism and environmental projects should be agreed between the parties and action plans devised. The mine has in the past for example, supported Mtunzini in the upgrading of the electrical cables in the town and improving the water flow in the river.
- The mine is to add value to the marketing and promotion efforts of Mtunzini and Zini River Estate as eco-tourism destinations. This may be achieved by distributing information about the environmental actions undertaken by the mine and may include, for example, the hosting of guided tours to the mine for residents and visitors thereby promoting the image of the mine with the visitors and residential investors.

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Bibliography

- Business Tech. (2023, March 23). *South Africa's property market is in trouble*. Retrieved April 25, 2023, from <https://businesstech.co.za/news/property/674579/south-africas-property-market-is-in-trouble/#:~:text=House%20price%20growth%20in%20South,down%20from%202.7%25%20in%20January.>
- Court, K. H. (2013). *MTUNZINI CONSERVANCY v TRONOX KZN SANDS (PTY) LTD (unreported, Case No. 10629/2012, KwaZulu Natal High Court, 8 January 2013); 2013 JDR 0026 (KZD)* . KZN High Court .
- Erasmus, J. (2013, December 3). *The Witness*. Retrieved April 25, 2023, from The Citizen : <https://www.citizen.co.za/witness/archive/mtunzini-residents-battle-sand-mining-bid-20150430/>
- FNB. (2024). Historical prime interest rates.
- Frith, A. (2011). *Mtunzini, Main Place 589132 from Census 2011*. Retrieved April 23, 2023, from <https://census2011.adrianfrith.com/place/589132>
- Global Property Guide: South Africa . (2024 , June 25). South Africa's Residential Property Market Analysis .
- Golder Associates . (2011, June). *Social Impact Assessment for the proposed Exxaro KZN Sands Fairbreeze Mining Operations*. KZ-FB-ENVI-APP-002D11.
- Graham Muller Associates. (2011). *Exxaro KZN Sands Fairbreeze Mining Economic Impact Assessment for Ore Bodies A, B, C and D*. Report No. FES11/01.
- Interview. (2023, April and May). Mtunzini estate agent. (E. d. Beer, Interviewer)
- Joyce, L. K. (2014 , September 7). *IOL* . Retrieved April 23, 2023, from <https://www.iol.co.za/news/south-africa/kwazulu-natal/kzn-town-takes-on-mining-company-1747178>
- Lightstone . (2023). *Lightstone Property Trends* . Lightstone .
- Lightstone Property . (2023). Mtunzini and Zini River Estate Sales Data.
- Ndabele Kriby Planners . (2015, September 11). Zini River Estate Final Layout Plan .
- Ooba Homeloans. (2023). *The property trends we're seeing in South Africa right now*. Retrieved April 25, 2023, from <https://www.ooba.co.za/resources/property-trends-south-africa/>
- Portfolio Property Investments. (2023). South African Property Market – What's happening?
- Property24. (2024). *Property Trends and Statistics*. Retrieved May 10, 2023, from Property24: <https://www.property24.com/mtunzini/zini-river-estate/property-trends/17513>
- Sotheby's, Lew Geffen. (2024, September 9). Understanding property value: facts vs fiction.
- Standard Bank . (2023). *Economy 2023 Insights* . Retrieved April 25, 2023, from <https://corporateandinvestment.standardbank.com/cib/global/insights/economy2023>
- TCI Magazine. (2019, September 1). The Perception of Value.
- Techworld Consulting Engineers. (2024, August). Tronox KZN Sands Traffic Impact Assessment .
- The Real Estate News. (2023, April 29). *The State of SA's Property Market in Q1 2023*. Retrieved April 25, 2023, from [https://propertywheel.co.za/2023/04/the-state-of-sas-property-market-q1-2023/#:~:text=SA%20house%20prices%20\(in%20real,well%20as%20a%20declining%20economy.](https://propertywheel.co.za/2023/04/the-state-of-sas-property-market-q1-2023/#:~:text=SA%20house%20prices%20(in%20real,well%20as%20a%20declining%20economy.)
- Times Property. (2022, December 30). Factors To Determine The Market Value Of A Property.

**AN ASSESSMENT OF THE POTENTIAL IMPACT OF THE PROPOSED TRONOX KZN SANDS PORT
DURNFORD MINE PROJECT ON PROPERTY VALUES IN THE MTUNZINI AREA**

- Trade Economics. (2023). *South African Housing Trends*. Retrieved MAY 10, 2023, from <https://tradingeconomics.com/south-africa/housing-index>
- uMlalai Municipality . (Undated). *uMlalai Municipality, Tourism* . Retrieved April 26, 2023, from <https://umlalazi.gov.za/index.php/tourism>
- Umlalazi Local Municipality. (12 February 2020). *Municipal Valuation Roll 2020 to 2025*. Valuation roll.
- Umlalazi Municipality. (2024). *Municipal Overview*.
- WSP . (March 2023). *Tronox Port Durnford Integrated Environmental and Social Impact Assessment: Comments and Responses Report*, .
- WSP. (2024, June). *Draft Scoping Report* .
- WSP. (2024, October). *Integrated Environmental Authorisation for the Port Durnford, KwaZulu-Natal. Final Scoping Report*.
- WSP. (2024). *Integrated Environmental Authorisation for the Port Durnford Mine, KwaZulu-Natal. Final Scoping Report*.
- WSP. (2024a). *Integrated Environmental Authorisation for the Port Durnford Mine, KwaZulu-Natal - Draft Scoping Report*. Midrand, Johannesburg: WSP.
- WSP. (February, 2025). *Port Durnford Visual Impact Assessment*.
- WSP Environmental. (2022). *Proposed Port Durnford Mining Operation Background Information Document*. WSP.
- WSP Group Africa (Pty) Ltd. (August 2024.). *Environmental Acoustic Impact Assessment Port Durnford Project* .
- WSP. (October 2024). *Integrated Environmental Authorisation for the Port Durnford Mine, KwaZulu-Natal. Final Scoping Report*. EIA Report.
- WSP. (October 2024a). *Tronox Port Durnford Final Scoping Report in Respect of the Scoping and Environmental Impact Assessment (S&EIA): Comments and Responses Report (CRR)*.
- WSP. (August 2024.). *Tronox KZN Sands Environmental Acoustic Impact*.
- Zini River Estate. (Undated). *Mtunzini area information* . Retrieved May 5, 2023, from <https://www.ziniriverestate.co.za/area-information>

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ANNEXURE A: PROPERTY TREND DATA IN MTUNZINI TOWN, MTUNZINI SUBURB AND ZINI RIVER ESTATE

LIGHTSTONE MTUNZINI AND ZINI ESTATES PROPERTY TRENDS

Medium prices and Number of Registrations Source: (Lightstone Property , 2023)

TOWN	TYPE	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
MEDIUM PRICE (R'000)											
MTUNZINI SUBURB	Freehold	1 225	1 288	1 498	1 200	1 400	1 650	1 430	1 550	1 895	1 950
MTUNZINI TOWN	Freehold	1 250	1 300	1 500	1 600	1 400	1 800	1 500	1 850	2 000	2 350
ZINI RIVER ESTATE	Freehold	2 125	3 275	2 039	2 650	2 650	3 000	3 050	3 000	3 200	3 700
MTUNZINI SUBURB	Sectional Title	1 150	1 200	860	1 010	922	950	1 000	1 000	1 100	1 290
MTUNZINI TOWN	Sectional Title	1 200	1 200	1 030	1 100	1 100	800	950	950	1 100	1 322
ZINI RIVER ESTATE	Sectional Title	1 300	1 265	1 300	1 250	1 299	180	182	180	800	1 520
MTUNZINI SUBURB	Vacant	450	330	365	420	450	380	445	565	500	630
MTUNZINI TOWN	Vacant	425	396	550	585	630	645	618	571	615	650
ZINI RIVER ESTATE	Vacant	400	408	500	591	675	1 500	635	578	640	660
NO OF REGISTRATIONS											
MTUNZINI SUBURB	Freehold	22	26	40	21	21	16	33	31	52	27
MTUNZINI TOWN	Freehold	23	28	43	33	24	17	35	42	63	38
ZINI RIVER ESTATE	Freehold	1	2	3	12	3	1	2	11	11	11
MTUNZINI SUBURB	Sectional Title	7	13	21	14	18	13	15	23	41	21
MTUNZINI TOWN	Sectional Title	12	23	32	21	26	29	33	34	53	30
ZINI RIVER ESTATE	Sectional Title	5	10	11	7	8	16	18	11	12	9
MTUNZINI SUBURB	Vacant	1	3	6	5	5	3	4	3	17	5
MTUNZINI TOWN	Vacant	24	20	45	45	27	14	24	28	52	35
ZINI RIVER ESTATE	Vacant	23	17	39	42	22	11	20	25	35	30

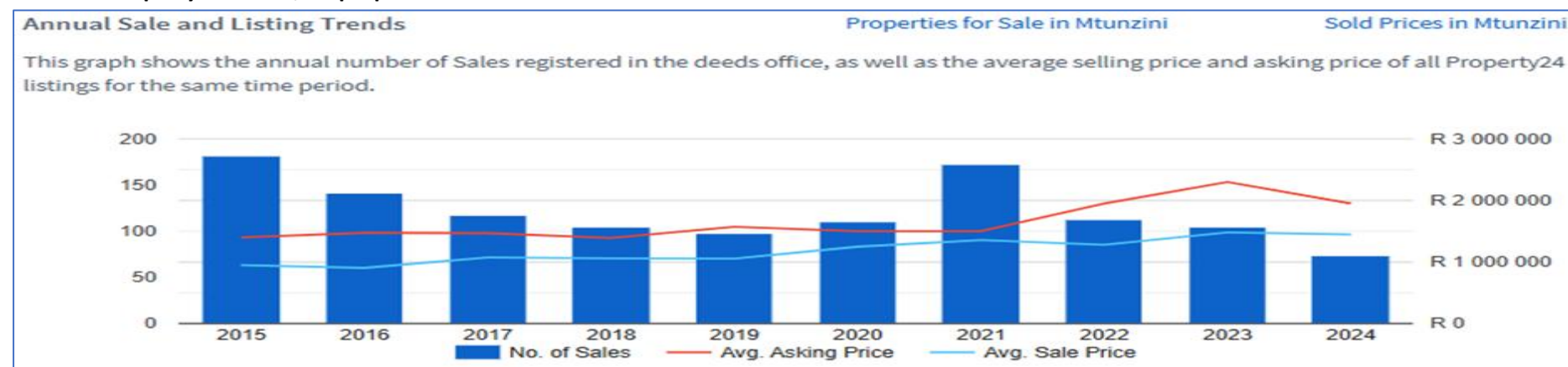
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PROPERTY24 MTUNZINI INCLUDING ZINI ESTATES PROPERTY TRENDS

MTUNZINI INCLUDING ZINI ESTATES				
ALL PROPERTIES	Number of Sales	Average Sales Price	Number of Sales	Average Sales Price
			% GR PA	% GR PA
2015	182	950 000	-	
2016	144	905 000	-20.9	-4.7
2017	117	1 075 000	-18.8	18.8
2018	105	1 060 000	-10.3	-1.4
2019	98	1 055 000	-6.7	-0.5
2020	110	1 250 000	12.2	18.5
2021	172	1 375 000	56.4	10.0
2022	113	1 280 000	-34.3	-6.9
2023	105	1 482 000	-7.1	15.8
CAGR	-6.6	5.7	Real Growth Rate 2015 to 2023	0.3% pa

Source: (Property24, 2024)

Mtunzini Property24 trends, All properties



Source: (Property24, 2024)

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MTUNZINI INCLUDING ZINI ESTATES				
SECTIONAL TITLE	Number of Sales	Average Sales Price	Number of Sales	Average Sales Price
			% GR PA	% GR PA
2015	62	910 000	-	
2016	25	1 100 000	-59.7	20.9
2017	38	1 087 000	52.0	-1.2
2018	59	675 000	55.3	-37.9
2019	36	975 000	-39.0	44.4
2020	33	1 000 000	-8.3	2.6
2021	46	1 212 000	39.4	21.2
2022	36	1 295 000	-21.7	6.8
2023	52	1 522 000	44.4	17.5
CAGR	-2.2	6.6	Real Growth Rate 2015 to 2023	1.2 % pa

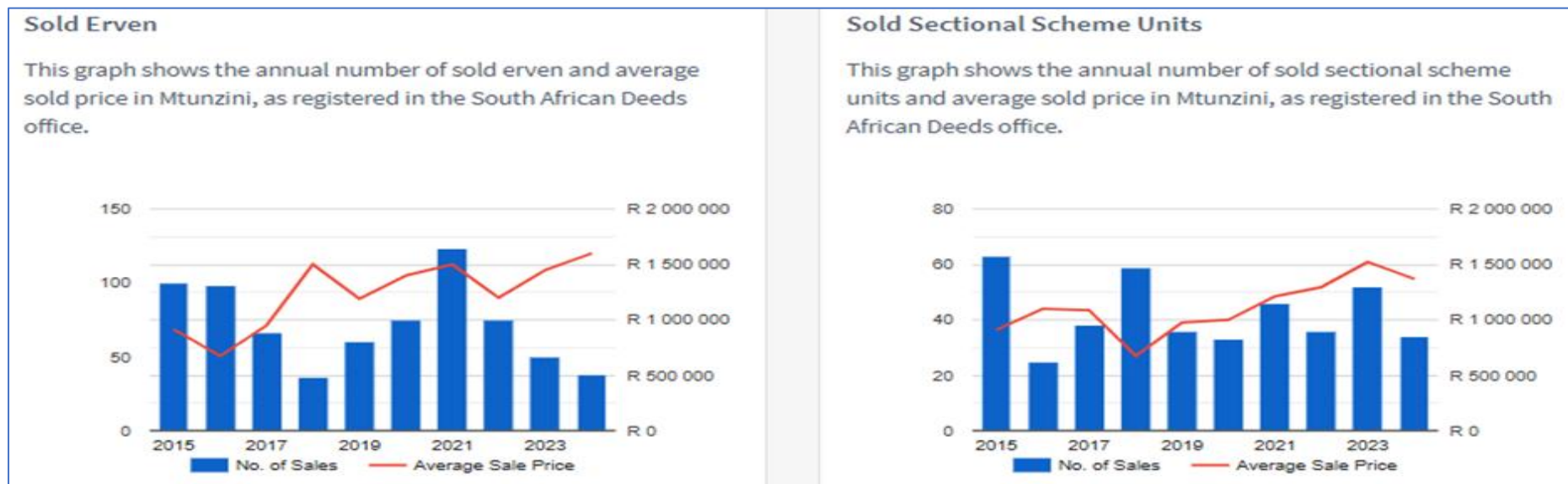
Source: (Property24, 2024)

MTUNZINI INCLUDING ZINI ESTATES				
SOLD ERVEN	Number of Sales	Average Sales Price	Number of Sales	Average Sales Price
			% GR PA	% GR PA
2015	100	915 000	-	
2016	98	675 000	-2.0	-26.2
2017	66	950 000	-32.7	40.7
2018	36	1 500 000	-45.5	57.9
2019	60	1 190 000	66.7	-20.7
2020	75	1 400 000	25.0	17.6
2021	123	1 500 000	64.0	7.1
2022	75	1 200 000	-39.0	-20.0
2023	50	1 450 000	-33.3	20.8
CAGR	-8.3	5.9	Real Growth Rate 2015 to 2023	0.5% pa

Source: (Property24, 2024)

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Mtunzini Property24 trends, Erven and Sectional Title sales



Source: Property24, Accessed in October 2024.

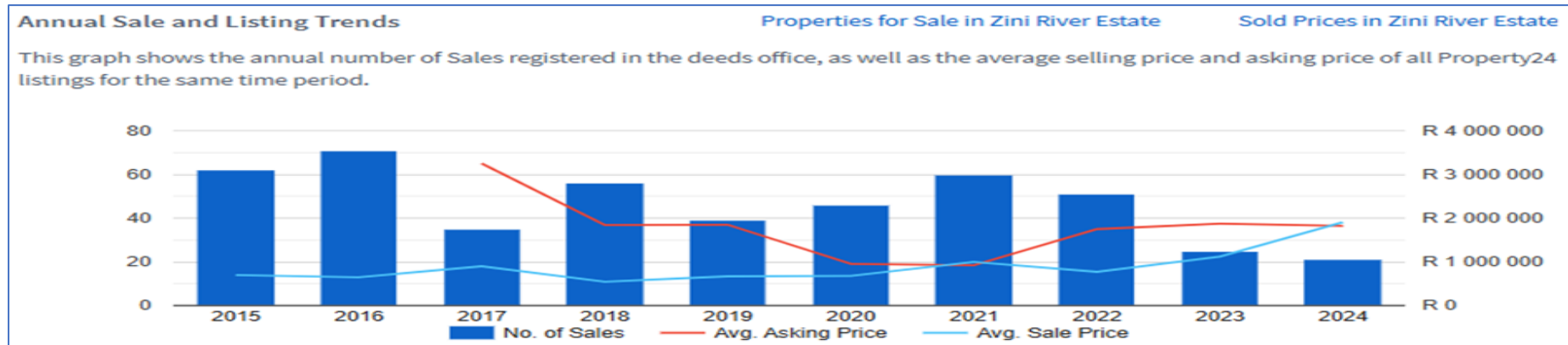
PROPERTY24 ZINI RIVER ESTATE PROPERTY TRENDS

ALL PROPERTIES	Number of Sales	Average Sales Price	Number of Sales	Average Sales Price
		Average Sales Price	GR PA	GR PA
2015	62	700 000	-	
2016	71	650 000	14.5	-7.1
2017	35	900 000	-50.7	38.5
2018	56	545 000	60.0	-39.4
2019	39	670 000	-30.4	22.9
2020	46	680 000	17.9	1.5
2021	60	1 000 000	30.4	47.1

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2022	51	772 000	-15.0	-22.8
2023	25	1 120 000	-51.0	45.1
CAGR	-10.7	6.1		

Zini River Estates Property24 All property trends

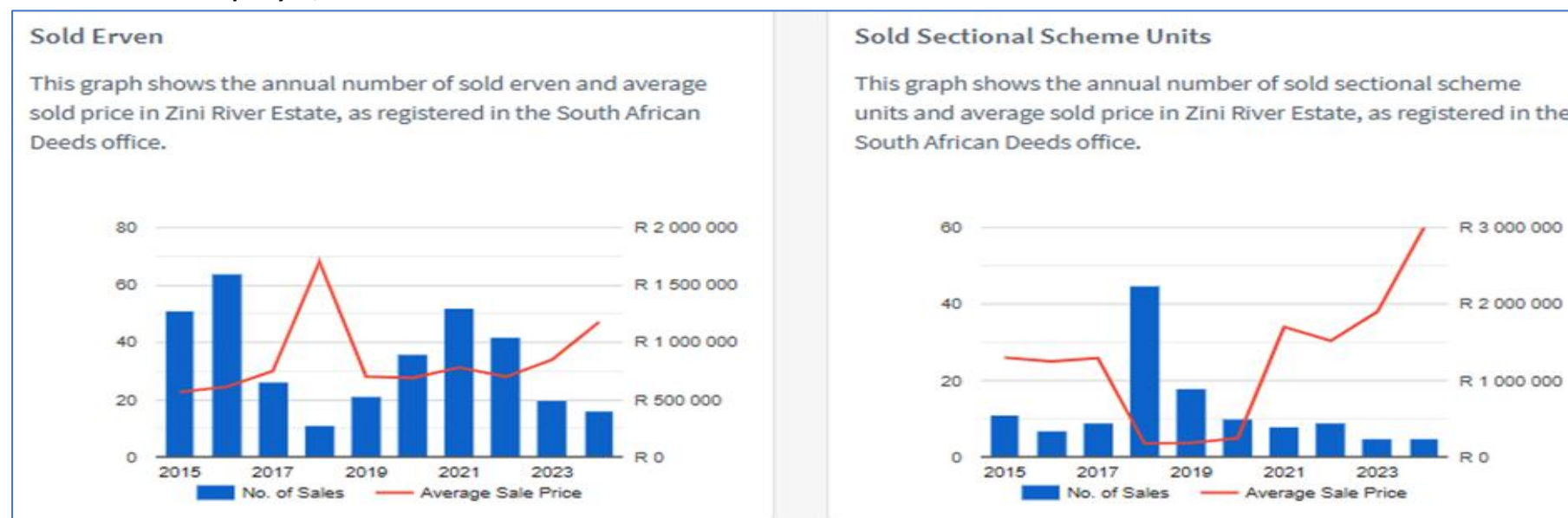


SECTIONAL TITLE	Number of Sales	Average Sales Price	Number of Sales	Average Sales Price
		Average Sales Price	GR PA	GR PA
2015	11	1 300 000	-	
2016	7	1 250 000	-36.4	-3.8
2017	9	1 292 000	28.6	3.4
2018	45	180 000	400.0	-86.1
2019	18	185 000	-60.0	2.8
2020	10	245 000	-44.4	32.4
2021	8	1 700 000	-20.0	593.9
2022	9	1 520 000	12.5	-10.6
2023	5	1 900 000	-44.4	25.0
CAGR	-9.4	4.9		

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SOLD ERVEN	Number of Sales	Average Sales Price	Number of Sales	Average Sales Price
		Average Sales Price	GR PA	GR PA
2015	51	567 500	-	
2016	64	610 000	25.5	7.5
2017	26	750 000	-59.4	23.0
2018	11	1 700 000	-57.7	126.7
2019	21	700 000	90.9	-58.8
2020	36	690 000	71.4	-1.4
2021	52	780 000	44.4	13.0
2022	42	700 000	-19.2	-10.3
2023	20	850 000	-52.4	21.4
CAGR	-11.0	5.2		

Zini River Estates Property24, Erven and Sectional Title sale trends



Source: Property24, Accessed in October 2024.

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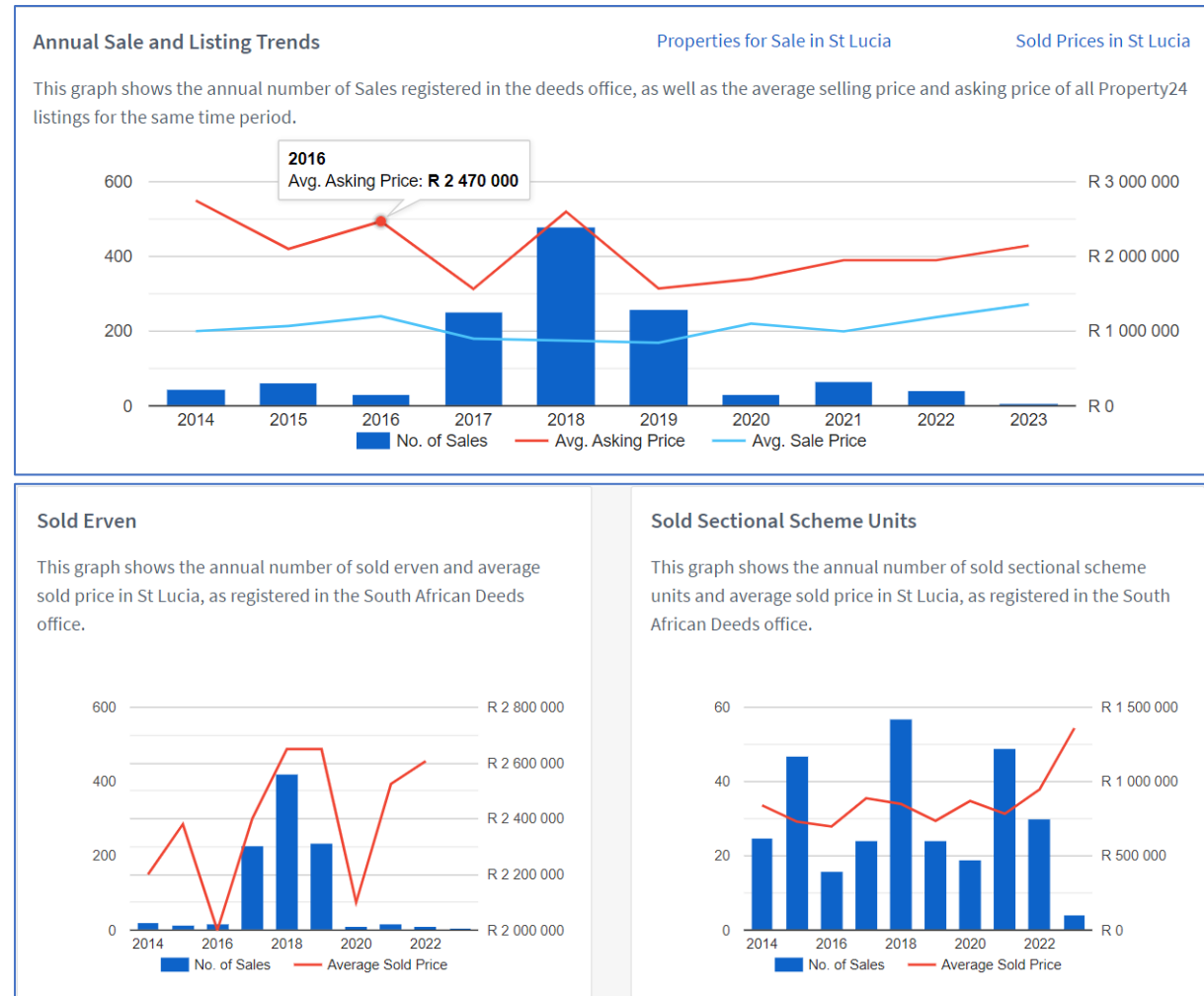
ANNEXURE B: COMPARATIVE PROPERTY TRENDS IN COASTAL TOWNS

Comparative Coastal towns property trends Source: Property24, 2023.

TOWN	2014	2015	2016	2017	2018	2019	2020	2021	2022	CAGR %	AVERAG E OVER 9 YEARS
AVERAGE SALES PRICE RM											
Mtunzini	1.00	0.95	0.92	1.07	1.06	1.05	1.25	1.36	1.28	2.78	1.10
Zini River Estate	0.60	0.70	0.65	0.90	0.54	0.67	0.68	1.00	0.77	2.81	0.72
St Lucia	1.00	1.07	1.20	0.90	0.87	0.84	1.10	1.00	1.18	1.86	1.02
Thukela Mouth	0.00	0.65	0.65	0.00	0.70	0.68	0.85	1.09	1.55	-	0.69
Zinkwazi Beach	1.75	1.82	1.50	1.72	2.03	1.95	2.05	2.26	2.46	3.86	1.95
Tinley Manor	1.17	1.45	1.10	1.53	1.50	1.40	0.97	1.57	1.45	2.41	1.35
Salt Rock	1.90	2.30	2.13	2.70	2.97	2.40	2.50	2.50	3.18	5.87	2.51
Shakas Rock	1.80	2.10	1.87	2.15	2.40	2.10	2.20	2.60	2.87	5.32	2.23
Ballito	1.55	1.80	1.85	2.10	2.27	1.94	2.20	2.20	2.30	4.48	2.02
NUMBER OF SALES											
Mtunzini	110	180	140	117	105	98	110	171	112	0.20	127.00
Zini River Estate	46	62	71	35	56	39	46	60	51	1.15	51.78
St Lucia	45	61	32	38	86	35	30	66	41	-1.03	48.22
Thukela Mouth	0	3	2	0	2	3	3	11	4	-	3.11
Zinkwazi Beach	40	45	60	49	54	44	32	43	48	2.05	46.11
Tinley Manor	16	15	17	12	15	14	6	27	21	3.07	15.89
Salt Rock	50	45	33	43	34	27	28	49	41	-2.18	38.89
Shakas Rock	173	103	104	99	134	91	95	136	111	-4.81	116.22
Ballito	2049	2195	2069	1871	1917	2503	1586	2448	2884	3.87	2 169.11

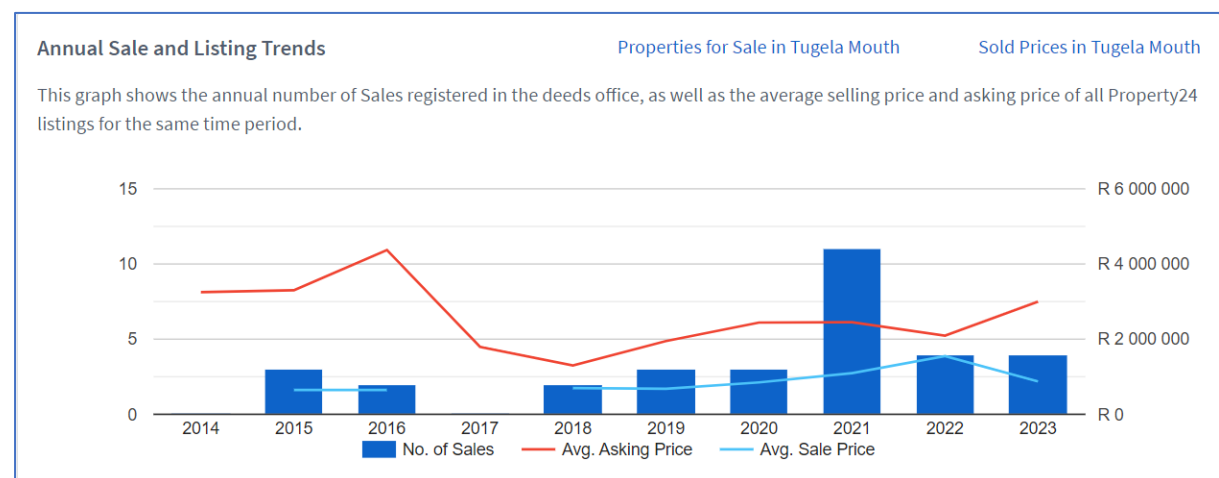
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ST LUCIA

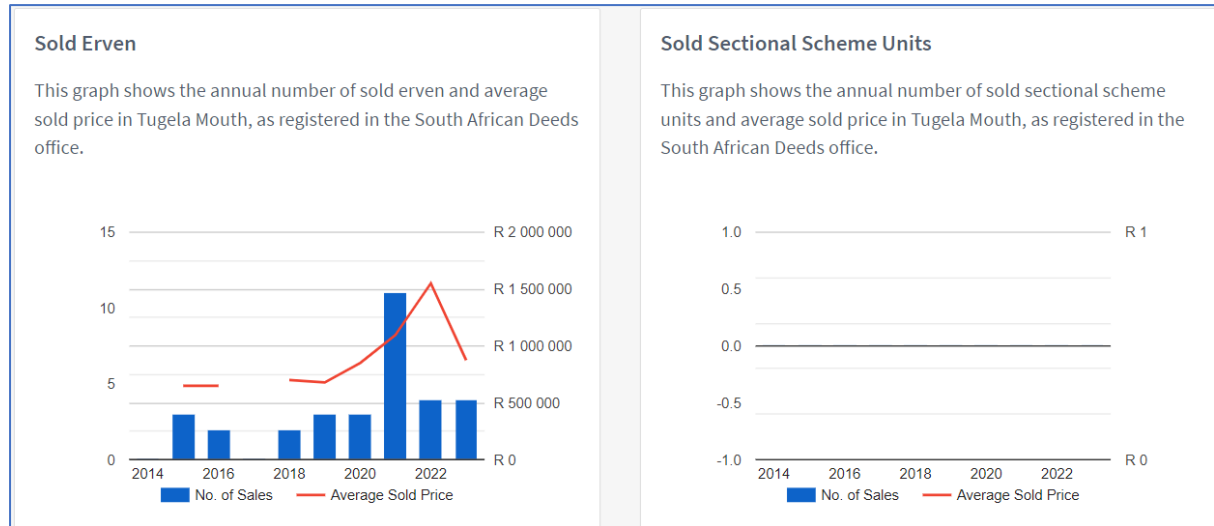


Source: Property24, Accessed in May 2023

THUKELA MOUTH



AN ASSESSMENT OF THE POTENTIAL IMPACT OF THE PROPOSED TRONOX KZN SANDS PORT DURNFORD MINE PROJECT ON PROPERTY VALUES IN THE MTUNZINI AREA



Source: Property24, Accessed in May 2023

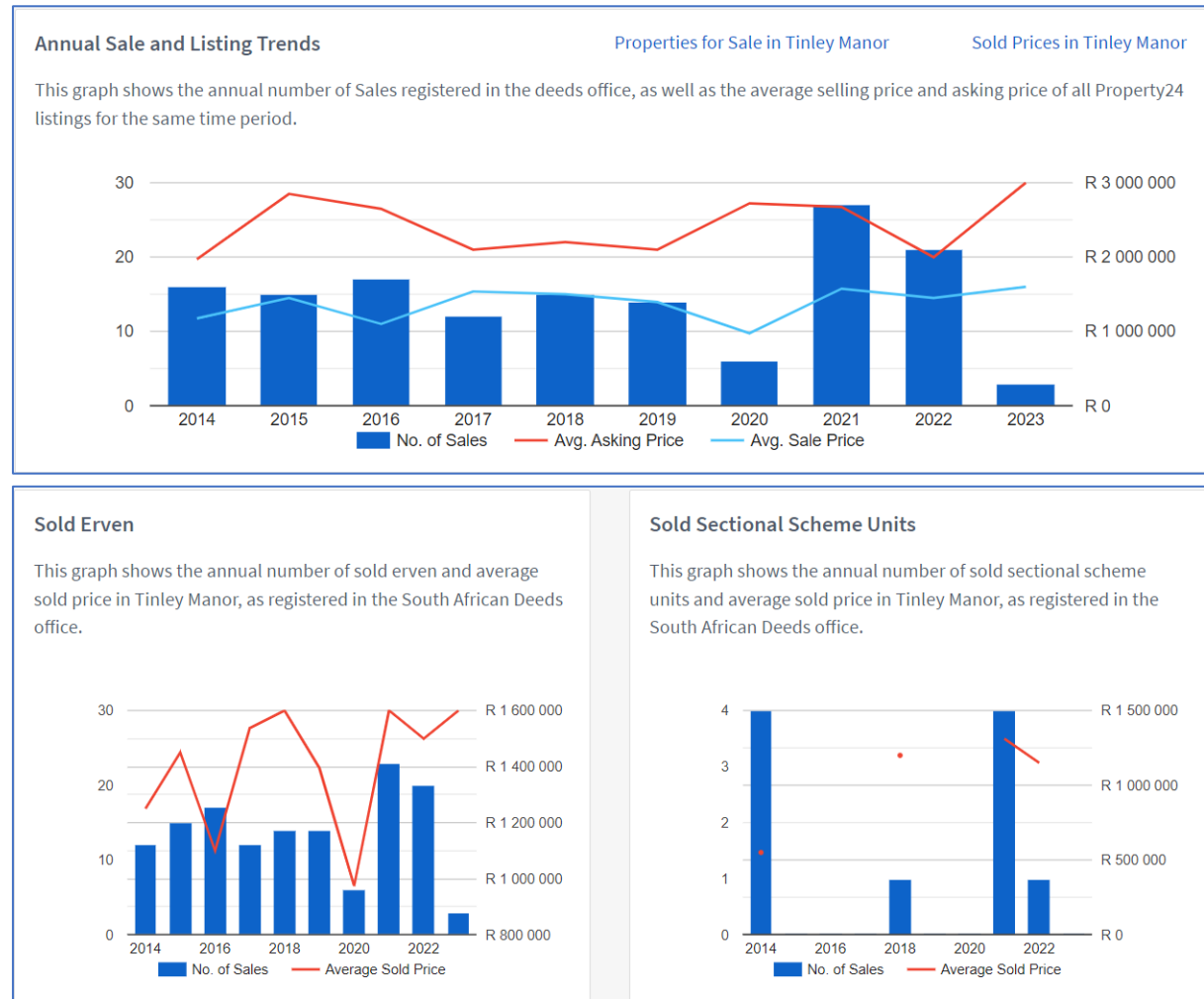
ZINKWAZI BEACH



Source: Property24, Accessed in May 2023

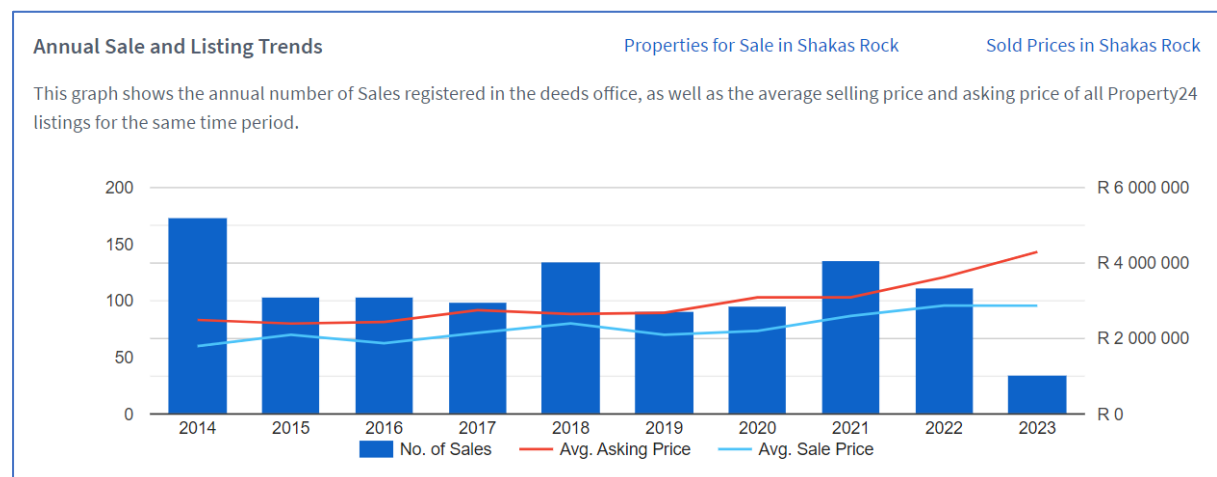
AN ASSESSMENT OF THE POTENTIAL IMPACT OF THE PROPOSED TRONOX KZN SANDS PORT DURNFORD MINE PROJECT ON PROPERTY VALUES IN THE MTUNZINI AREA

TINLEY MANOR



Source: Property24, Accessed in May 2023

SHAKAS ROCK



AN ASSESSMENT OF THE POTENTIAL IMPACT OF THE PROPOSED TRONOX KZN SANDS PORT DURNFORD MINE PROJECT ON PROPERTY VALUES IN THE MTUNZINI AREA



Source: Property24, Accessed in May 2023

BALLITO



Source: Property24, Accessed in May 2023

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ANNEXURE C: ZINI RIVER ESTATE LAND USE AND ERVEN

Zini River Estate land use and erven for the total development of all 5 phases

LAND USE	NO OF ERVEN	RESIDENT IAL UNITS	AREA (HA)	%
Residential dwelling	264	263	60.53	34.57
Medium density residential	3	99	15.05	8.59
Community facilities – estate management, recreation, maintenance, storage, caretaker	1		1.70	0.97
Community facility - clubhouse	2		.97	0.56
Private recreation area	3		.44	0.25
Conservation area	4		88.20	50.36
Access erven – roads	7		8.23	4.70
TOTAL	284	362	175.12	100.00

Source: (Ndabele Kriby Planners , 2015)