APPENDIX 23

SOCIO-ECONOMIC IMPACT ASSESSMENT FOR THE PROPOSED CAPE WINELANDS AIRPORT, FISANTEKRAAL

MARCH 2025

MULTI-PURPOSE
BUSINESS SOLUTIONS

Socio-Economic Impact Assessment for the proposed Cape Winelands Airport, Fisantekraal

Consultative Report

prepared by
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Executive Summary

Cape Winelands Airport (Pty) Limited acquired the 150-ha Fisantekraal Airfield in November 2020 and proposes the redevelopment thereof that comprises the current Cape Winelands Airport (CWA) and various adjacent land portions to represent a total size of 220 ha. The CWA currently serves as a general flying airfield and offers flight training in the Cape Town area, aircraft maintenance, private charter flights, hangarage for private plane owners, and the sale of aviation fuel. Once expanded, CWA will be able to:

- Facilitate domestic and international scheduled commercial services
- Facilitate general aviation operations
- Facilitate cargo operations
- Be a reliever airport in Cape Town, offering redundancy and additional airport capacity
- Be an alternate airport for airlines with direct scheduled services inbound to Cape Town
- Include commercial property developments.

The expansion of CWA is well aligned with the National Airport Development Plan (NADP), favouring the redevelopment and expansion of existing airports over greenfield airport developments.

Fit with spatial planning

In keeping with the *Guidelines for Economic and Social and Specialist input into EIA Processes* (CSIR, 2005 and Department of Environmental Affairs and Development Planning, 2007), the project should fit with planning frameworks and be desirable from a societal cost-benefit perspective. National and provincial policy, strategies and programmes indicate that the proposed development would not infringe on the City of Cape Town's current spatial planning and would enhance the planning context's strategic objectives at the national, provincial and local levels.

The proposed CWA would be a large private investment focusing on transport and commercial use that could contribute to economic growth and job creation during the construction and operational phases. The project's roll-out offers an opportunity for skills development and a contribution to transport infrastructure development. The City of Cape Town's Integrated Development Plan (IDP) and Spatial development Framework (SDF) specifically support the CWA development, and the Northern District Plan includes amending the urban development edge to include the CWA. However, the amendment of the urban development edge does not cover the proposed landside development, which would require motivation to deviate from the MSDF.

Identification of impacts

The question that needs to be addressed in the context of perceptions and concerns raised by Interested and Affected Parties (I&APs) is whether the proposed CWA development is desirable from a societal cost-benefit perspective. There would be both positive and negative socio-economic consequences if the project proceeds, and the need thus exists to determine whether mitigation of the negative impacts could be implemented and to what extent the developer would be willing to introduce the recommended mitigation measures.

Development Alternatives

1) **No-Go Alternative 1** – development of the current airport within its current rights, i.e. four runways up to 1 454 m and 6 000 m^2 GLA (which is insufficient to support the approved 301 Air Traffic Movements)
2) **Runway Alternative 2** - a commercial and aviation hub (350 000 m^2 GLA) with a 3 500 m main runway at orientation 01-19 and initial retention of cross runway 14-32 in Phase 1
3) **Runway Alternative 3** - a commercial and aviation hub (350 000 m^2 GLA) with a 3 500 m main runway at orientation 01-19 (no cross runway)
4) **Preferred Alternative 4** – same footprint as Alternative 3, with minor changes (the fuel line was extended into the GA precinct; the internal precinct boundaries were corrected; the three boreholes are indicated;

the incoming potable line has been added) **Note that a 4-year construction period was assumed for the first phase of the Preferred Alternative 4**.

Impact Ratings

The following table summarises the residual impacts of the four alternatives:

Nature of the Impact	Rating after mitigation (Residual impact)			
	Alternative 1	Alternative 2	Alternatives 3 & 4	Cumulative (Alternative 4)
Construction				
Traffic flows along access roads	(scored as Low negative in Transport Impact Assessment)			
Nuisance factors (dust and noise)	Very Low (-)	Low (-)	Low (-)	Medium (-)
Influx of jobseekers	Low (-)	Medium (-)	Medium (-)	High (-)
Construction workers – local communities	Very Low (-)	Low (-)	Low (-)	Medium (-)
Increase in local crime	Very Low (-)	Low (-)	Low (-)	Medium (-)
Economic income and employment opportunities	Low (+)	High (+)	High (+)	High (+)
Operations				
Provision of transport infrastructure	Low (+)	High (+)	High (+)	High (+)
Traffic flows along access roads	(scored as Low negative in Transport Impact Assessment)			
Sense of place	Very Low (-)	Medium (-)	Medium (-)	High (-)
Increase in local crime	Very Low (-)	Low (-)	Low (-)	Medium (-)
Risk of informal settlements	Very Low (-)	Low (-)	Low (-)	Medium (-)
Nearby farming and business operations	Very Low (-)	Low (-)	Low (-)	Medium (-)
Surrounding property values – residential	Very Low (-)	Medium (-)	Medium (-)	Medium (-)
Surrounding property values – commercial/industrial	Very Low (+)	Low (+)	Low (+)	Medium (+)
Bulk infrastructure requirements	Very Low (-)	Low (-)	Low (-)	Medium (-)
New business development	Very Low (+)	High (+)	High (+)	High (+)
New employment opportunities	Very Low (+)	High (+)	High (+)	High (+)
Revenue accruing to public authorities	Very Low (+)	High (+)	High (+)	High (+)

Cumulative impacts refer to any other developments and existing activities within the immediate area that could compound any positive or negative impacts of the proposed development. This usually refers to similar nearby developments, i.e. Cape Town International Airport (CTIA) about 22 km southwest of the CWA site. Given their distance and geographical location at the southern and northern ends of the City of Cape Town (CoCT), cumulative impacts linked to traffic, light and air pollution are unlikely. However, the CTIA precinct may experience some impact if business is redirected to CWA; the level of such an impact could only be ascertained once CWA operations commence. Furthermore, several residential developments in the Fisantekraal area in the planning or construction stages, such as Bella Riva Estate, Groot Phesantekraal, Greenville Garden City and Buh-Rein Estate, could contribute cumulatively to traffic, sense of place, etc. Multiple developments in the Fisantekraal area could compound employment opportunities and economic benefits. However, if introduced concurrently, additional developments in the immediate and surrounding areas may compound negative impacts. These typically relate to the sense of place, traffic, infrastructure requirements, crime and nuisance factors that could negatively impact nearby residents and business operations.

Recommendations

Many potential impacts could be mitigated by introducing the measures proposed by various specialists; these must be considered and implemented by the developer. Monitoring and evaluating socio-economic impacts and continuously assessing the outcomes would further inform the social and economic fabric and the impact on surrounding land users. The following mitigation measures related to the **socio-economic context** are proposed and should be consolidated into an Implementation Plan as part of the Construction Environmental Management Plan (CEMP) and/or Operational Environmental Management Plan (OEMP).

Pre-construction (CEMP)	
A Procurement Strategy that includes the following and applies to the project: (a) Initiate the activity during the first phase of the development; (b) The strategy is the responsibility of the contractor(s) collectively under the guidance of the Municipality; (c) Focus on opportunities for local labour in the surrounding areas and businesses as a priority. Contractors are required to indicate the geographical location of sub-contractors (businesses) and local labour; (d) Local contractors invited to tender for work in the context of the terms and conditions included in RFP documentation, which would include skills development, on-site training, gender equality, etc.; (e) Approved programme aligned with the future construction phases of Greenville Garden Cities, Bella Riva and other planned/approved developments in the area to minimise the impact on the greater community.	
Pre-construction & Construction (CEMP)	
A Communication Strategy that addresses directly and indirectly affected residents and surrounding landowners, with specific reference to activities, timelines and intended impacts related to the construction phase and all related activities associated with the implementation of the project (i.e. during the operational phase). • **Objectives** - To orientate, generate awareness and gain positive attitudes among stakeholders as far as possible; and - To engage and inform stakeholders of progress regarding all phases of construction. • **Target audience** - Property owners and users of the land portions directly surrounding the proposed activity; and - Other stakeholders and property owners that may be affected. • **Major types of messages** - Inform directly affected residents on the periphery of the development site and others that would frequent the area; - The commencement date for construction activities related to the project; - Duration and extent of the construction activities and details of individual construction activities; - Progress updates, including any delays in a construction-related activity; and - Introduce appropriate signage to warn persons frequenting the area and those residing adjacent to the development area.	
Construction phase	
Nuisance factors (dust and noise)	Dust and noise emissions during the construction period should be minimised through a Construction Environmental Management Plan (CEMP).
Influx of job seekers, impact on local communities	Contractors need to employ people from the immediate area whenever possible. A Social Engagement Plan, formal monitoring systems and contingency plans for larger-than-expected in-migration should be prepared and implemented to assist with the management of jobseekers and so-called community business forums.
Increase in local crime	Co-operation between the Developer and contractors is essential to ensure that the area around the proposed development remains secured during construction. On-site security measures, such as perimeter fencing, controlled access and security guards and patrols would minimise the risk.

Operational phase	
Sense of place, residential property values	Implement recommendations by relevant specialists to mitigate negative visual, traffic, noise and air pollution impacts. All these impacts affect the socio-economic fabric of the area surrounding the CWA and along the flight path.
Local crime	Co-operation between Developers and contractors and on-site security measures.
Informal settlements	Formal housing could address the area's housing needs, eliminating the need for informal structures. Private landowners should ensure that the authorities deal with unauthorised land settlements.
Nearby farming and business operations	Refer to mitigating measures that relevant specialists proposed (in particular agro-ecosystem, noise and air pollution).
Bulk infrastructure requirements	Implement recommendations from engineering reports.

Impact statement

The most significant socio-economic benefit from the proposed CWA project is the anticipated contribution to the aviation industry in the Western Cape. In terms of **economic benefits**, an estimated R8,9 billion in capital investment could generate R23,1 billion in new business sales, which could add R8,8 billion (net of the import leakage) to the GGP of the Western Cape economy during construction. During an initial 20-year operational period, which includes a substantial component of maintenance expenditure, an estimated R36,1 billion in nominal terms could generate R76,1 billion in new business sales.

The project could sustain about 32 433 (direct, indirect, and induced) **employment opportunities** during construction, including ongoing capital expenditure upgrades over 20 years. This could increase household incomes by R3,8 billion over 22 years. During the initial 20 years of operations, the project could sustain about 102 732 direct, indirect, and induced employment opportunities, adding R17,7 billion in household income.

Several potential **negative impacts** were identified, including traffic flows, sense of place, impact on property values, nuisance factors, local crime, influx of job seekers, risk of informal settlements (due to expanding economic activity in the area) where construction workers could impact local communities). However, if the CWA is properly managed and the mitigation measures indicated by the various specialists are implemented, the significance of these impacts would be low to moderate.

Our analysis indicates that the benefits would outweigh the potential socio-economic costs of the proposed CWA expansion. The proposed development and operation of the CWA at the proposed location do not indicate any fatal flaws, provided that all regulatory standards and permit requirements issued to operate airport facilities are adhered to.

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1 BACKGROUND

1.1 Introduction

Cape Winelands Airport (Pty) Limited acquired the 150-ha Fisantekraal Airfield in November 2020 and proposed a redevelopment that comprises the current Cape Winelands Airport (CWA) site and various adjacent land portions to represent a total development size of approximately 885 ha. The CWA currently serves as a general flying airfield and offers flight training in the Cape Town area, aircraft maintenance, private charter flights, hangarage for private plane owners, and the sale of aviation fuel. If the proposed expansion of the CWA proceeds, Cape Town will become a 'Multi-Airport City'. The airport will support the aviation sector by providing scheduled airline operations, General Aviation (GA) services, an alternate airport for fuel planning, a reliever airport, and a logistics hub.

Dr Jonathan Bloom of Multi-Purpose Business Solutions was commissioned as an independent consultant to prepare a Socio-Economic Impact Assessment of the proposed development. Dr Bloom (PhD, Corporate Finance) is the principal member of Multi-Purpose Business Solutions and was a professor of real estate at Stellenbosch University until 2013. He has conducted more than 100 socio-economic impact and other assessments as an independent consultant for real estate and other South and Southern Africa developments. Jonathan has research skills in designing and implementing research projects from a qualitative and quantitative perspective. He majored in statistics and business economics, and his background in statistical modelling of economic aspects related to assignments and cost-benefit assessments has been used to assist clients with evaluating socio-economic impacts associated with projects. Refer to **Annexures D and E** for a declaration of independence and his *curriculum vitae*.

1.2 Terms of Reference

The Socio-Economic Impact Assessment includes the following:

1. Description and understanding of the nature and scope of the proposed project, location, layout, etc.;
2. An overview of the economic development patterns in the City of Cape Town;
3. A socio-demographic and -economic profile of the population (and communities) residing within specified concentric zones from the site;
4. Place the envisaged project in the context of spatial planning regulations and other guideline documents and assess the fit from an economic perspective;
5. Identify possible social and economic impacts / consequences / implications associated with the proposed development;
6. Ascertain the overall monetary benefits[1], i.e. Gross Value Added (GVA) and job creation potential on the local economy during the construction and operational phases; and
7. Proposals for a framework for monitoring and evaluation of the socio-economic impacts.

1.3 Approach & Methodology

Our approach for assessing the socio-economic impacts of the proposed development is presented in **Figure 1**. The illustration shows that evaluating a project's financial feasibility and long-term viability is an essential point of departure, as long-term positive economic impacts can only flow from a financially sustainable or viable project. It must also fit and demonstrate compatibility with economic and integrated planning for the area, which also covers spatial planning. These hurdles are a critical aspect of economic desirability, which ensures that the proposed

[1] Monetary benefits refer to the direct benefit received by the National Government, Western Cape Province and the City of Cape Town in the form of funds in return for services (e.g. municipal revenues, etc.) rendered or applied fiscal legislation (e.g. taxes, levies, etc.).

development complements economic planning as reflected in spatial development planning and the local economic development plans and strategies for the area.

In keeping with the *Guideline for Involving Economic Assessment Specialists in EIA Processes* (CSIR, 2005) and the *Guideline for Involving Social Assessment Specialists in EIA Processes* (Department of Environmental Affairs and Development Planning, 2007), the project should fit with planning frameworks and be desirable from a societal cost-benefit perspective (concerning the assessment of social impacts). The *Need and Desirability Guidelines* (Republic of South Africa, 2014) also apply to the economic and social justification for the development proposed in the particular location. In addition, adherence to Appendix 6 of the NEMA Regulations and alignment with existing guidelines are essential (**Annexure C**).

Given the nature of the proposed activities and the importance of the project for direct investment in the City of Cape Town (CoCT), monitoring and evaluation throughout construction and operations are essential. Both the envisaged positive and potential negative impacts need to be monitored through an inclusive and credible process, with a broad framework outlined in this report.

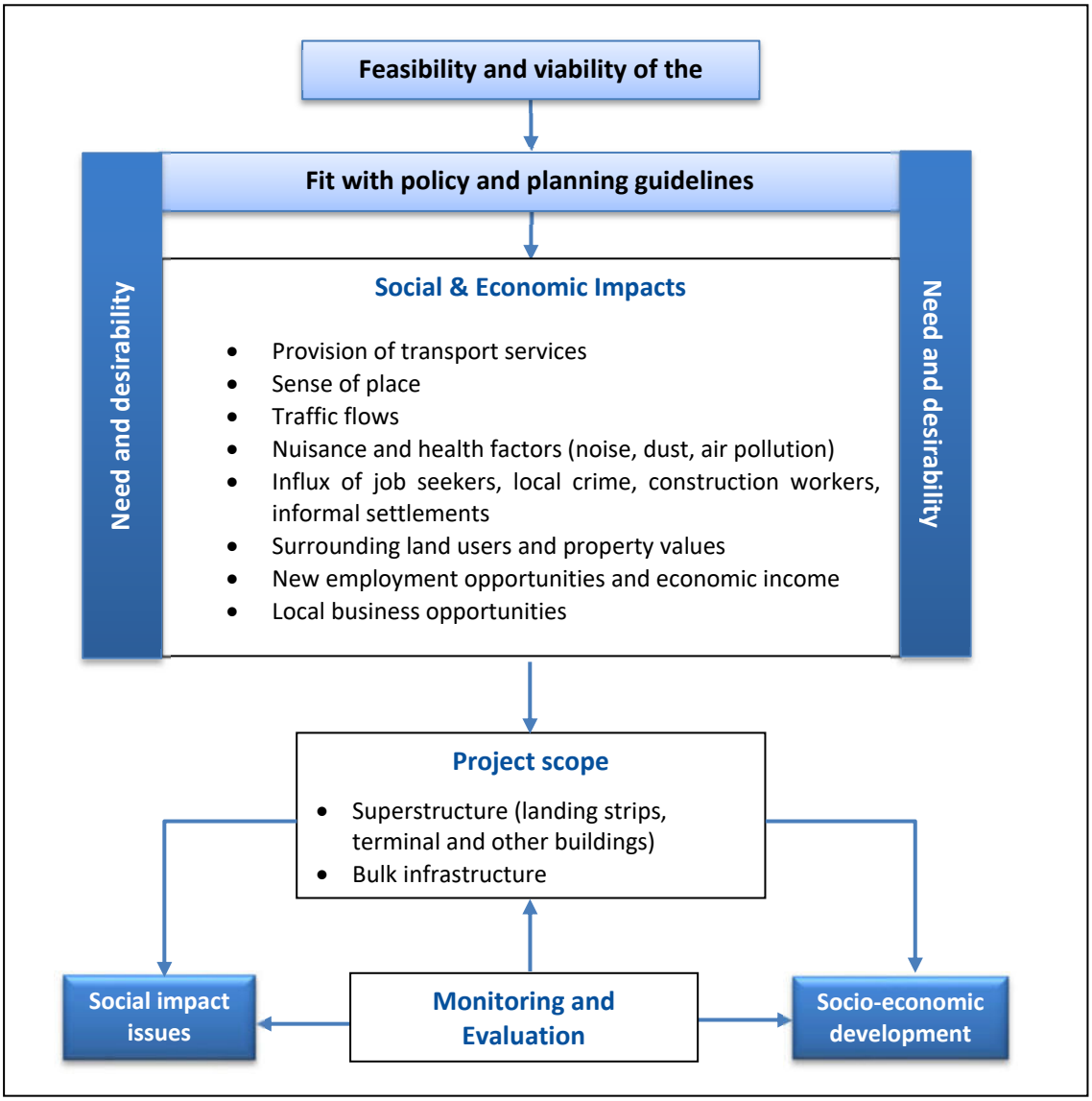


Figure 1: Methodology used for specialist socio-economic input for the EIA process
Source: Multi-Purpose Business Solutions

1.3.1 Data gathering and analysis

The analysis of primary inputs usually includes information collected from interviews with key stakeholders and/or representatives of stakeholder groups that are affected directly or indirectly by the proposed development. Secondary sources (including reports and publications) are consulted to inform the independent socio-economic assessment and complement the primary research. Our approach to addressing comments from stakeholder groups and Interest and Affected Parties (I&APs) is to include relevant inputs from the environmental process conducted by the Environmental Assessment Practitioner (EAP) and assess the inputs from a socio-economic perspective. Where applicable, I&APs will be identified for further consultation to obtain additional information for inclusion in the report. These parties may include, but are not limited to, the local authority, landowners, surrounding landowners, local business associations (where applicable), community leaders and representatives, interest groups, etc.

The study area for the socio-economic impact assessment is defined as concentric zones that include all sub-places (communities) within 10 km and 20 km from the development site. Refer to the socio-demographic and -economic analysis in **Section 4** for a detailed description of the communities likely to be affected by the development.

1.3.2 Impact assessment

The proposed project would have both qualitative and quantitative impacts (benefits and costs) on the socio-economic fabric of the area. We have considered the core project's quantitative economic impact, i.e., positive and negative consequences, and analysed the socio-economic impact. Where applicable, a qualitative assessment of both benefits and costs is provided from a social perspective. The different impacts are assessed using the impact assessment criteria indicated in **Annexure A**; a summary of the assessment outcomes is provided in **Annexure B**.

Per NEMA EIA Regulations (2014, as amended), the potential impacts of the different Alternatives are assessed and compared with the No-Go Alternative:

1) **No-Go Alternative 1** – development of the current airport within its current rights (i.e. maximum runway of 1 454 m and 6 000 m^2 GLA)
2) **Runway Alternative 2** - a commercial and aviation hub (350 000 m^2 GLA) with a 3 500 m main runway at orientation 01-19 and initial retention of cross runway 14-32 in Phase 1
3) **Runway Alternative 3** - a commercial and aviation hub (350 000 m^2 GLA) with a 3 500 m main runway at orientation 01-19 (no cross runway)
4) **Preferred Alternative 4** – same footprint as Alternative 3, with minor changes (the fuel line was extended into the GA precinct; the internal precinct boundaries were corrected; the three boreholes are indicated; the incoming potable line has been added)

Estimating the economic impact of a project or development can be a constructive process for understanding the potential benefits. However, it should be noted that estimating these benefits is more helpful in understanding the likely order of intensity related to impacts rather than specific amounts. An economic impact assessment traces spending through an economy and measures the cumulative effects of that spending over time. Defining the area of influence is an important first step in the process. The focus of the economic impact is local, regional or national. The nature of the proposal determines the impact region, which can be the entire country, province, individual, or combination of municipalities. An economic impact assessment would estimate the economic consequences of the development on the metro and provincial economy.

An Economic Impact Analysis (EcIA) assesses the direct and indirect contributions of construction spend and operational revenues (spend) on the economy by applying multipliers[2]. Benefit-Cost and Economic Impact Analyses are not directly comparable, but are complementary in providing a micro-level appraisal and macro-economic assessment of the impact related to the development.

[2] Multiplier effects refer to additional (multiplied) employment opportunities and economic activity (income) as a result from the development.

Once the direct investment is determined, the indirect/induced impacts are estimated. An Economic Impact Analysis is thus based on the multiplier concept, which estimates how much additional economic activity will result from an investment of R1 in the economy. It is termed as such because the total impacts are larger than an investment's initial, direct impact during construction or operations. For example, an aggregate economic multiplier of 2,50 would mean that for each Rand spent on the operation of the airport, R2,50 is generated. Subtracting the original R1,00 of operational spending (direct impact) leaves R1,50 of additional spending on items and services, referred to as the indirect/induced impact.

For this study, a Social Accounting Matrix (SAM) is used to assess and estimate the indirect/induced impacts of the project on the local/regional economy. A SAM represents the flows of all economic transactions within an economy (regional or national), and the total direct contribution to and indirect impact on, the economy in terms of value added to Gross Geographic Product (GGP).

1.4 Assumptions

The following assumptions were used for calculations related to employment and economic income during construction:

- The structure and composition of the Western Cape economy will remain unchanged. This is necessary to enable the use of multiplier analyses.
- No significant political or other administrative changes will take place on a national or provincial level.
- An initial construction period of 4 years and additional construction during operations were used to assess employment during construction.
- Only total labour demand is considered; no race, gender or skill level is considered; and
- An assumed import leakage[3] of 20% for construction.

1.5 Limitations

Several limitations were identified during the study:

- Due to the reclassification of employment categories in the 2011 Census, no comparative assessment is possible with the 2001 Census.
- Comparing the population figures for the 2001 and 2011 Census is impossible, as different categories were considered for various demographic items in the 2011 Census.
- The data provided in reports prepared by Statistics SA and the data extracted from a detailed assessment of enumeration areas[4] and sub-places do not correspond or are missing.
- Although the 2022 Census high-level results have been released, many issues cast doubt on its credibility and validity. The large undercount of 30% is far above any acceptable norm and does not provide confidence in the results. Without credible information for the current demographic and socio-economic context, we used the 2011 Census data.
- Given the lack of detailed information on the potential revenue of the proposed development, it is impossible to quantify the potential contribution toward the local economy once all the envisaged components are complete and operating.

[3] Leakage refers to capital or income that exits an economy or system, e.g. building materials sourced from outside the local economy.
[4] An enumeration area (EA) is the geographic area surveyed by one census representative and is composed of one or more adjacent blocks.

2 PROJECT DESCRIPTION

2.1 Project location and site description

The CWA, formerly Fisantekraal Airfield, is an ex-South African Air Force airfield built circa 1943 outside Fisantekraal in the Durbanville area. The Airfield is located on various portions of Farms 724, 474 and 942 in the City of Cape Town (Subcouncil 7, Ward 105). The site has been included in the Urban Development Edge in the 2023 Municipal Spatial Development Framework. It is approximately 2 km northeast of Fisantekraal, 8 km north of Kraaifontein and 6 km north of the N1. It takes direct access off Lichtenburg Road (R312), which links with the R304 to the east and the R302 (Klipheuwel Road) to the west. It is located between the three major regional growth centres of Cape Town, Stellenbosch and Drakenstein, and along north-south and east-west road networks that provide opportunities for transport-related developments.

The CWA currently serves as a general flying airfield that is mainly used for flight training in the Cape Town area, but also offers aircraft maintenance, private charter flights, hangarage for private plane owners, and the sale of aviation fuel (stored in a 28 000 L containerised tank). Currently, there are four concrete runways of 90 m wide in varying lengths (700 m to 1 500 m), designated 01/19, 05/23, 14/32 and 03/21 (**Figure 2**). Runway 05-23 is mainly used during strong winds from the south and in normal operation conditions, whereas Runway 14-32 is mostly used during high winds from the east/west to minimise crosswinds (Cape Winelands Airport Limited, 2021a). Runways 01/19 and 03/21 have not been used recently.

There are currently 20 permanent structures of varying heights with a combined floor area of approximately 6 000 m^2 and numerous metal shipping containers used for storage (Townsend, 2020). The permanent buildings accommodate a flight school, helicopter school, private hangars, storage areas, fuel bays, offices, and other airport-related activities. Four old structures were built during World War II as part of the airport's defences; three are derelict, and one is no longer roofed; the fourth was adapted for staff housing many years ago. The landing strips are poorly maintained and must be cleared regularly of moss and/or shrubs growing through the cracks. Port Jackson shrubs and trees cover most of the site between and surrounding the landing strips.

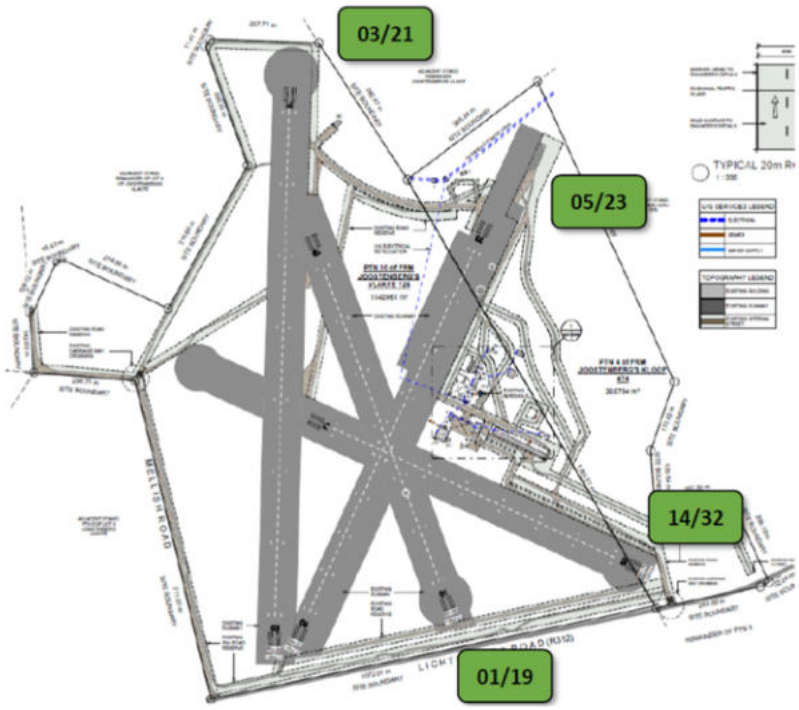


Figure 2: Site map of the current Cape Winelands Airport
Source: Cape Winelands Airport Limited (2021a)

2.2 Zoning rights

In November 2020, the Airfield was acquired by Cape Winelands Airport (Pty) Limited and adjacent land parcels were secured to take the scope of the current development to approximately 885 ha (**Figure 3**). In March 2021, an application to rezone the 150-ha site (Ptn 4 of Fm 474 Joostenbergs Kloof and Ptn 10 of Fm 724 Joostenbergs Vlakte) from Agricultural with its existing lawful non-conforming use as an airport to Transport Zoning 1: Transport Use (TR1) with a permanent consent use for "airport" subject to a Site Development Plan and a condition limiting the gross leasable area to the existing 6 000 m², was approved.

To accommodate the CWA expansion, H & A Planning (2024) indicated that the landside development to the west of the runway (approx. 263 ha) requires rezoning to "*Transport Zone 1 with consent to permit an airport*" (grey area in **Figure 3**). The Primary Uses under TR1 include transport use, multiple parking garage, utility service, shop, restaurant, service trade, office, warehouse, rooftop base telecommunication station, minor freestanding base telecommunication station, minor rooftop base telecommunication station and container site. In addition, consent use may also be applied for business premises, flats, place of assembly, place of entertainment, hotel, conference facility, service station, airport, helicopter landing pad and industry, among others. However, such consent uses should not detract from transport use as the dominant use.

Figure 3: Proposed zoning for CWA (left) and affected land portions (right).
Source: Cape Winelands Airport Limited (2023), H & A Planning, 2024

2.3 Project Alternatives

The assessment will consider the No-Go option and three development alternatives:

1) **No-Go Alternative 1** – development of the current airport within its current rights (i.e. maximum runway of 1 454 m and 6 000 m² GLA)
2) **Runway Alternative 2** - a commercial and aviation hub (350 000 m² GLA) with a 3 500 m main runway at orientation 01-19 and initial retention of cross runway 14-32 in Phase 1
3) **Runway Alternative 3** - a commercial and aviation hub (350 000 m² GLA) with a 3 500 m main runway at orientation 01-19 (no cross runway)

4) **Preferred Alternative 4** – same footprint as Alternative 3, with minor changes (the fuel line was extended into the GA precinct; the internal precinct boundaries were corrected; the three boreholes are indicated; the incoming potable line has been added)

The Runway Alternatives Report (Cape Winelands Aero, 2023) concluded that the **No-Go (Alternative 1)** does not allow CWA to meet its strategic and business objectives, nor the opportunity to offer a tremendous value proposition to the region, stakeholders, customers and nearby communities. Alternative 1 was thus not considered to be viable. CWA has a runway system consisting of four crossing non-instrument runways, with lengths ranging from 1 050 to 1 454 m. The length of the current runways would limit the airport's operations to Code A and B aircraft, as 3 500 m for the main runway is required to accommodate up to Code F aircraft. However, it does meet the 700 m runway requirement for Code 1A non-instrument operations and enables light aircraft operations during certain wind conditions. The CWA can thus resurface the current runways to allow for increased operations of Code A and Code B aircraft, but it would not be able to balance the terminal and landside capacities with the anticipated growth on the airside. Code A and B operators would require CWA to develop hangars, Fixed Base Operators (FBO) facilities, a terminal building, parking, roads, bulk services, etc., to facilitate these operations end-to-end. Scheduled operations would also require apron parking stands. CWA's Land Use Planning Application indicates that "the development shall be limited to a maximum of 6 000 m^2 Gross Leasable Area (GLA). However, the 6 000 m^2 GLA is fully utilised, leaving no capacity for further development. CWA can thus not develop the associated infrastructure and facilities within the current development rights.

For **Runway Alternative 2**, the Airport development would occur in two phases: Phase 1 would involve the construction of a new 3 500-m primary runway at orientation 01-19 (with a 280 m runway strip width) and would initially retain cross runway 14-32 as a secondary runway (**Figure 4**). As the airport develops, the secondary cross runway would be closed and absorbed into the greater development as part of Phase 2.

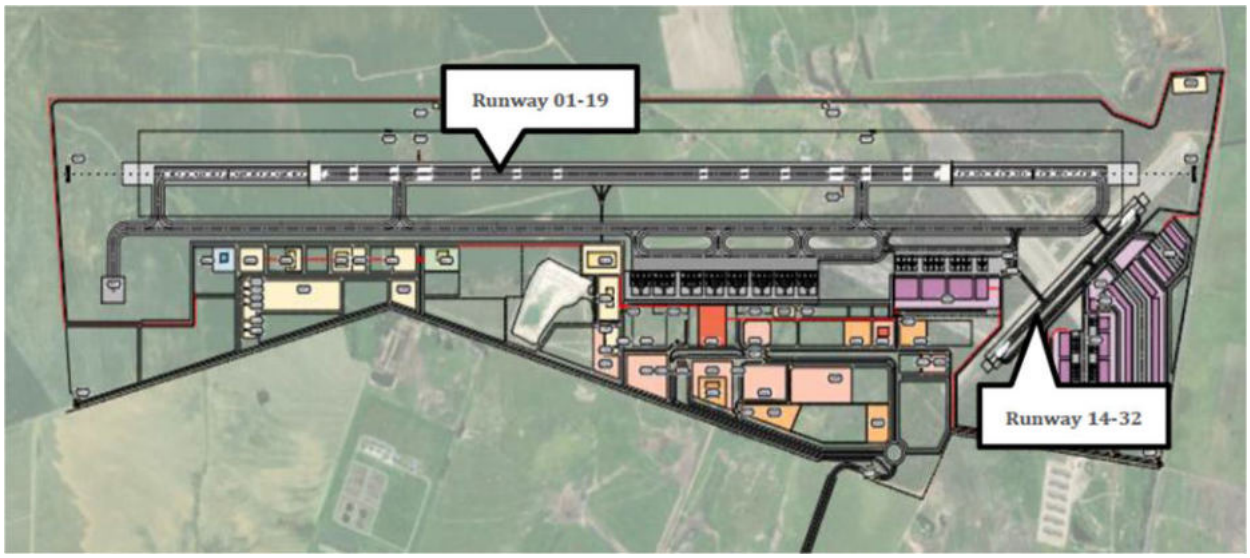


Figure 4: Phase 1 of Alternative 2, indicating the main runway 01-19 and the cross runway 14-32.
Source: Cape Winelands Airport, 2023a

Further studies after the Scoping phase informed **Alternative 3**, excluding the existing cross runway 14-32 as a secondary runway. Airport development would still be undertaken in two phases. Phase 1 would focus on developing the fundamental infrastructure of the airport, as well as the infrastructure and facilities required for diversion operations. This would include site clearing, bulk earthworks, stormwater management infrastructure installation, terminals, aircraft stands, and essential airport operational facilities (Zutari, 2025). Phase 2 would be focused on increasing the capacity and functionality of the Services Precinct, the Airport Terminal Precinct and the General Aviation Precinct.

2.4 Alternative 3 project components

The proposed expansion of CWA would allow the airport to:

- Facilitate domestic and international scheduled commercial services
- Facilitate general aviation operations
- Facilitate cargo operations
- Be a reliever airport in Cape Town, offering redundancy and additional airport capacity
- Be an alternate airport for airlines with direct scheduled services inbound to Cape Town
- Include commercial property development

The proposed development is based on five strategic pillars:

1. CWA's complementary role as General Aviation Hub: General aviation is a key market and an integral part of CWA's business strategy. There are other airfields within 30 km of CWA, but each is already at or near its maximum hangar capacity, with short runways suitable for only a small portion of the sector. They face significant barriers to expansion due to various factors (location, size, zoning, availability of land). The expansion of the CWA would provide much-needed relief. CWA will, therefore, be the only airport in the region other than CTIA with the infrastructure capable of serving the broader General Aviation (GA) sector. With CWA, the GA subsector can finally consolidate at one airport in an environment conducive to growth, stimulating further economic activity.

2. CWA's complementary role as an Operational Alternate Aerodrome (Diversion Airport): The decision to apply for an ICAO Code 4F instrument operations and ICAO Category 9 fire and rescue level of protection with a 3.5 km runway followed extensive industry consultations with airlines and airline associations. The airline operators require this level of infrastructure and services to use CWA as an alternate airport in the event of diversions from CTIA. From the specialist studies, it is clear that such capability and capacity could reduce operating costs by up to 5% per flight for airlines with direct flights inbound to Cape Town. The savings in cost are a direct result of a reduction in fuel uplift and fuel burn, the latter having a further positive impact by reducing carbon emissions up to 5% per flight, leading to greener skies.

   Globally, the airline industry is challenged to achieve net-zero emissions by 2050. The existence of CWA would enable a 5% reduction in carbon emissions for every flight flying into CTIA. It would allow Cape Town to be ahead of the curve in being an attractive destination for users who value lower costs and environmental considerations—an increasing trend amongst global travellers. Through this, CWA would also align with the aspirations set out in the NADP. Projected indications are that the cumulative savings or value retained would exceed R1 billion per annum when considered and calculated across all airlines.

   The specialist studies confirmed that further development and expansion of CWA would significantly contribute to providing real relief for the airline operators in terms of costs and route profitability. Airline margins are very low, 2-5%, and a 5% reduction in the operating costs of a route would make a meaningful impact, not only in retaining current airlines but also in attracting airlines where the business case has been marginal to date. The savings have been verified as real, significant, and a key contributing factor in ensuring growing and sustainable air access into the region, much needed to mirror the growing population and economic activity in Cape Town and the Western Cape. These benefits would accrue with airlines continuing to fly into CTIA, i.e. as an operational alternate aerodrome.

   Another key benefit of CWA as an operational alternate aerodrome is that passengers have a diversion airport in the same city only 25 km from their intended destination.

3. CWA's role as an enabler for growth in Scheduled Commercial Services: The expansion of CWA, which includes a 3.5km Code F runway, will allow CWA to build scheduled services over time in and out of CWA. The approach towards CWA's introduction into the market is one of measured conservatism with CWA expected to process 5,23 million passengers per annum over 25 years.

4. CWA's complementary role as a Reliever Airport: CWA, as a reliever airport will perform multiple functions, from relieving congestion at CTIA during times of temporary increased activity or providing redundancy to the City of Cape Town in times when the airport is closed for an extended period. As a reliever airport:

    - CWA will improve the city's attractiveness to host major events by providing additional airport capacity. When the city bids for a mega event, air access is always a key consideration, and with added airport capacity, it could be the difference between being the winning bidder or not.
    - CWA will contribute toward continuity of economic activity (trade and tourism) in case of an extended closure at CTIA.
    - CWA could provide additional temporary or permanent capacity during peak periods (slot constraint times and peak seasons, noting the seasonal nature of visitor trends)
    - CWA will offer redundancy in the event of catastrophic fires, structural failures, fuel or power supply interruptions, etc.

    Add to that, the benefits of having a second airport, as is the case with most major prospering cities, ensuring full redundancy in the event of a failure of infrastructure, services or systems at any one of the airports. Recent failures have been experienced at CTIA, ranging from fuel supply to runway availability and power failures. On each occasion, the impact on the airlines and passengers is significant in terms of disruption, costs and inconvenience. It has also had knock-on effects on other airports.

5. **Commercial Development:** Multimodal connectivity and synergistic landside activities can turn the airport into an economic node and growth catalyst for the region. Based on its location, the airport can become a destination in and of itself. Non-aeronautical activities related directly to flight operations (such as advertising, retail, food & beverage) contribute to the all-around attractiveness of the airport. Transportation-related developments and commercial (or even light-industrial) property development can create significant value and diversification of income. Opportunities include a Training Academy, Hotels, Clubhouse (public restaurant), Garage and Cargo facilities.

The project is unique in a few critical ways:

1. It is a "brownfield" development, and the upgrading of existing airports is preferred to greenfield airports as per the NADP (2015, p. 52).
2. It is a private airport development, whereas most international airport developments in South Africa and Southern Africa are government-funded.
3. The ultimate goal is to develop the airfield into a fully commercial airport. Most historic international airports progressed naturally and organically from humble beginnings. With the final stage in mind, the CWA development can be planned most efficiently and practically.

After rigorous engagement with industry and specialists, a scope for the project - driven by the business plan and informed by technical runway limitations and considerations - was compiled to facilitate safe operations for aircraft up to code F (Cape Winelands Airport Limited, 2022). Some of these considerations include:

- **Runway length/width requirements** to accommodate aircraft up to code F.
- **Prevailing wind direction:** Aircraft take off against the wind to get airborne (SE/SW in summer, NW in winter).
- **Integration into existing airspace:** The CWA (FAWN) will be able to operate independently of Cape Town International Airport (FACT), mitigating any concerns of operational impact to/from FACT. The modelling and fast-time simulations conducted thus far by CWA indicate that CWA's operations can be integrated seamlessly into the regional airspace structure without compromising efficiency or safety.
- **Topography** - Runway systems require large portions of relatively flat land due to slope constraints that runways must comply with.

- **Obstacles** - Runway systems require flat land without obstacles (e.g. water masses, quarries or hills) that pose a danger to aircraft.
- **Land availability**.

2.4.1 Airside Precinct Development

In Phase 1, a 3,5-km runway at an orientation of 01-19 will serve up to Code 4F instrument operations (**Figure 5**). All operators will share this runway, including scheduled commercial and general aviation (PHS Consulting, 2024b). To improve efficiency for general aviation operations, intersection take-off points will be introduced on the runway. The airside development in Phase 1 will also include airside systems such as CAT II/III Instrument Landing System (ILS), Precision Approach Path Indicator, Glidepath Antennas, Meteorological Systems, Airfield Ground Lighting (AGL) and Remote Digital Control Tower Systems. Additional developments proposed as part of Phases 1 and 2 include Aircraft Parking Aprons, such as passenger terminal apron; general aviation and FBO aprons; isolation pad; as well as a cargo and aircraft maintenance, repair and overhaul (MRO) apron (Phase 2, **Figure 6**).

Aircraft parking stands range from ICAO Code B to ICAO Code F. As part of the Development, 11 Multiple Aircraft Ramps System (MARS) stands (21 code C equivalent) are foreseen; either contact MARS stands equipped with passenger boarding bridges (PBBs) and accommodate up to Code F aircraft, or remote stands for passengers who walk to or are bussed to the aircraft. In addition, one Code E cargo aircraft parking stand and two Code E MRO aircraft parking stands have been included.

Airside service roads will be constructed to provide access to airport assets for vehicles such as buses, ground service equipment and maintenance vehicles. An airport security fence will be erected in line with aviation security standards. The bulk electricity supply will terminate within the CWA site at a connection point comprising an Eskom local substation (final overhead pole, overhead drop-out line fuses, and medium-voltage 3-core cable connection to metering substation fitted with dual outgoing feeder connections) housed in a fenced or secure enclosure.

2.4.2 Landside Precinct Development

The following developments are proposed as part of Phase 1 & Phase 2 of the Land Side Precinct:

- **Passenger Terminal Building** (Phase 1): The Passenger Terminal Building (PTB) will be the nexus of the airport's operations, connecting airside and landside areas and facilitating passenger and baggage movements, while adhering to rigorous national and international regulations. It has been designed per the latest ICAO Annexes and the IATA Airport Development Reference Manual (12th edition, May 2022), ensuring compliance with aviation standards. The location and approximate size of the PTB have been predetermined in the airport master plan. The PTB will be a double-level building with a handling capacity of 5,2 MPPA, and the terminal has been designed to process both domestic and international passengers.

  Facilities will be designed specifically for the intended user groups and will comply with the relevant standards and recommended practices. These facilities will include specialised equipment and areas to facilitate check-in and bag-drop, security screening, and, in the case of international traffic, customs and emigration/immigration.

- The **VIP processing facility** will have direct access to the airside. Government officials, VIPs and CIPs (Commercially Important Persons) will be processed through the facility.
- Included in the Development for Phases 1 & 2 are **commercial developments,** approximately 350 000 m² GLA. The terminal precinct encompasses a terminal plaza with landmark hotels, and an aviation museum. The aeronautical hub functions include hangars, aviation clubs, an aviation training centre, workshops, light manufacturing, logistics, warehousing, and food processing.
- **Additional developments:** Petrol Service Station; Hotel; Access, egress and an internal vehicular road system; Drop and go facilities which will allow passengers to drop passengers off close to the passenger terminal building; Car rental facilities; Vehicular parking (multi-storey parking, at-grade parking); Pedestrian walkways; Substations; Billboards (indoor and outdoor, static and electronic); Droneport and vertiports; Gardens; Public transport facilities (Phase 2); Carpark/VTOL (Phase 2).

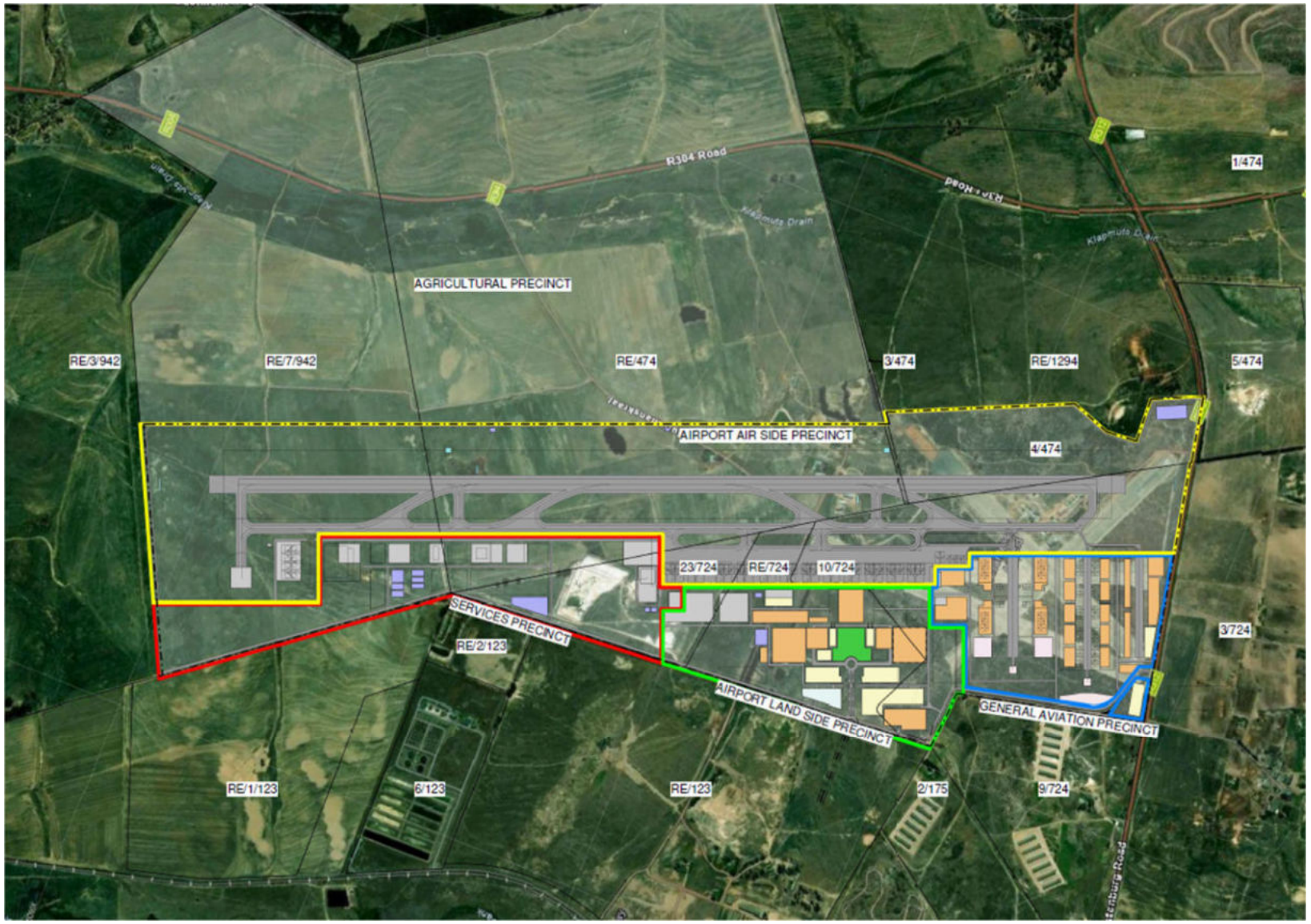


Figure 5: The proposed Site Development Plan for the Cape Winelands Airport, Phase 1
Source: Cape Winelands Airport Limited, 2024

Figure 6: The proposed Site Development Plan for the Cape Winelands Airport, Phase 2
Source: Cape Winelands Airport Limited, 2025

2.4.3 General Aviation Precinct

Phases 1 & 2 of the General Aviation (GA) Precinct will include Fixed Base Operators Hangars, General Aviation Hangars, a Clubhouse Area, Final Approach & Take-Off Infrastructure, an AVGAS Station, Substation, and Remote Digital Control Tower. The general aviation area for Phases 1 & 2, including business aviation, is located on the southern part of the airport site. The FBO facilities are located along a dedicated taxi lane that provides direct access to/from the main runway via the parallel taxiway. A GA kerbside refuelling station for AV-gas will be developed at the southernmost corner of the GA site. A GA clubhouse with airside views will be developed, with adjacent grass parking areas for visiting GA aircraft. The helicopter operations will be from dedicated Final Approach and Take-off areas.

2.4.4 Services Precinct

The key airport support facilities are the aircraft rescue and firefighting (ARFF) services, airport maintenance, ground support equipment (GSE) maintenance and staging, cargo, aircraft maintenance, repair and overhaul (MRO), aircraft fuel facilities and an airport operations centre. Also included is provision for solar PV, wind energy and a biodigester. Most of these facilities are located on the western side of the airport. All facilities are accessible from the secondary landside road system, which is accessed from the western entrance into the airport site. The following developments are proposed as part of Phase 1 & Phase 2 of the Services Precinct:

- The **fuel facilities** (Phase 1) consist of a bulk fuel depot, a general aviation kerbside refuelling station and a commercial/retail service station. An underground fuel line from the bulk fuel depot to the aprons is also provided for in Phase 2.
- **Aircraft Rescue and Fire Fighting** (Phase 1) - The airport will be equipped to provide a level of protection corresponding with Category 9 to meet the ICAO standards. The rescue and firefighting station is located close to the middle of the runway. It complies with the ICAO requirements, considering the response times of two minutes and not exceeding three minutes to any point of the operational runway and any other part of the movement area.
- **Cargo Facility** (Phase 1) - The cargo facility is planned to handle general and specialised cargo in a dedicated facility on the airside. The cargo facility is expected to handle both belly cargo (on passenger aircraft) and full freighter aircraft and is, therefore, located close to the passenger terminal building. Initially, full freighter aircraft can use the main apron, as aircraft stand demand is limited during off-peak hours. A single dedicated freighter aircraft stand will be provided when passenger peak traffic starts to spread out.
- The **airport maintenance facilities** (Phase 1) are planned in the services precinct, with access on both airside and landside.
- **GSE staging areas** (Phase 1) are close to the main apron. Two areas have been reserved for GSE parking adjacent to the main apron.
- The proposed **MRO facility** (Phase 1), including an apron and taxiway, is located North of the airport site. This includes one widebody aircraft parking position and an associated hangar. Moreover, additional space for several additional aircraft is available on the site.
- **Catering Building** (Phase 2), located in the airport's northern area, with direct airside access and landside access via the northern service entrance.
- **Solar PV, Biodigester and wind energy** (Phase 1 & Phase 2) - provision for solar PV and a biodigester as renewable energy sources is included, with wind energy (roof-based and land-based) considered as an alternative.
- **Airport Operations Centre** (Phase 1) - A dedicated Airport Operations Centre will provide space for several key airport support services such as airport offices, remote/digital air traffic control facilities, police services, clinic, airport staff facilities and emergency facilities, among other functions. This facility will also be a central facility for all government departments officiating at the airport. It is envisaged that this Operations Centre is a multi-storey building with five floors with access to both landside and airside on the ground floor.

- **Air Traffic Control Centre** (Phase 1) - The upper levels of the Airport Operations Centre will also contain an entire floor dedicated to the remote air traffic control centre.

Additional developments proposed as part of Phase 1 and Phase 2 of the Services Precinct development are a potable Water Reservoir, Groundwater Treatment Infrastructure, Potable Water Pump Station, Non-potable Water Storage, Solid Waste Storage, Wastewater Treatment Works (WWTW), substation, and Cargo Apron (Phase 2).

2.5 Preferred Alternative 4

Based on the comments received from IAPs and organs of state, a new preferred Alternative 4 was developed from the previous preferred Alternative 3. It has the same footprint and scope as Alternative 3, with minor additions (the fuel line was extended into the GA precinct; the internal precinct boundaries were corrected; the three boreholes are indicated; the incoming potable line has been added). This alternative also omits the short cross runway initially included in the project scope.

2.5.1 Alternative Design/Technology

Technology related to Energy – Solar & Biodigester vs Eskom supply

The site has an existing 66 kVA Eskom supply; the intention is to reduce reliance on the Eskom supply as far as possible. Renewable energy alternatives are being considered, specifically a biodigester plant and solar photo voltaic systems. In the previous DEIAR, wind turbines (land or roof-based) were also included, but this technology option has been removed based on design and space constraints. A completely off-the-grid source is intended as the ideal solution; the Eskom supply will serve as a backup source in the event of plant failure/maintenance requirements or unfavourable weather conditions.

Three types of sustainable energy sources were previously considered, namely, (a) the use of chicken manure/ sewage effluent in a biodigester plant to run spare-ignition gas-engine generator sets, (b) photo voltaic power supplies, including optional storage batteries, and (c) wind energy by turbine installation on roof or open land areas. As stated above, the option of wind energy has been removed. Furthermore, based on comments from IAPs, the use of chicken manure in the biodigester has been removed.

The initial assessed load of 5 MVA was evaluated by Eskom, who confirmed its capability to provide this load – sufficient for Phase 1. The final load required will be determined during the operating and expansion phases of the Airport (Phase 2 2). This increased load can be provided using sustainable power systems, notably photo-voltaic power with battery storage. It is also noted that alternative sustainable sources, including a biodigester generator plant and wind turbine system, can supplement battery energy storage for the intended continuous electrical loads above 5 MVA. This will enable a final energy mix of 50% Eskom and 50% sustainable sources, with periods of off-grid power used as far as possible. CWA intends to generate electricity from a renewable source of less than 100 MW, considering the available roof space and proposed open areas. The generation will be for private off-take and own use only. The operation will not feed power into the Eskom grid via a Renewable Energy IPP Procurement Programme (REIPPPP) bidding process. Therefore, the DEA&DP is the competent authority for authorisation of the power producing facility in terms of NEMA.

Biodigester Plant:

- The feed stream will comprise treated effluent from the WWTW (200 m^3/day) and cultivated biomass / energy crop (15 t/day). Organic waste from the site may be used to supplement the feed. Treated biosolids from the WWTW may be used as a supplement if tested and found not to be hazardous.
- System designed to provide 1MW continuous power at a cost/unit of electricity comparable to Eskom per-unit energy charges.
- Spark ignition engines provide the best fuel economy and cost efficiency when run continuously at 100% load (i.e., 24/7/365)

- A single biogas-fuelled engine should have an availability of around 93.5% (8 200 Hours PA out of a total of 8 766 hours PA). A second engine can be used to provide continuous backup if needed.
- The biodigester plant creates biogas, which accumulates in a (large) bladder system.
- The "waste" from the biodigester plant comprises "liquid fertiliser," which can be distributed to local farms within a 40 km radius of the plant.
- The biodigester can be combined with other sources of waste, including food waste and non-hazardous sewage. Treated sewage, not regarded as hazardous waste, can be used in the biodigester.

Photo-Voltaic Systems (Solar PV):

- According to SANDS, the entire site is ideal for creating photovoltaic (PV) power sources.
- The following considerations will apply to the provision and installation of PV Power Sources:
- Given the primary function and usage of the site as an airport, any PV Power Source system will be subjected to a Glint and Glare Study to ensure the panels installed will have no impact on air traffic safety.
- CWA intends to generate electricity from photo-voltaic renewable sources of more than 20MW but less than 100 MW, considering the available roof space and open areas proposed.
- The fitment of PV Power Sources to airport service buildings, commercial buildings, and parking facilities will present further opportunities for fitting PV Power Source Systems.
- The scope and sizes/areas of the commercial buildings and planned aircraft hangar facilities will also provide significant further opportunities for fitting PV Power Source Systems.
- The PV Power Sources will be integrated into the Site Micro-Grid electrical infrastructure using the planned medium-voltage distribution network. This will enhance their capability to provide power over the entire CWA Site Micro-Grid and further lessen the impact of rolling cloud cover decreasing PV output.
- The Site Micro-Grid will be set up, controlled, and managed to minimize the use of Secondary Backup and Primary non-renewable sources.

Eskom supply:

The CWA site has an existing Eskom supply that must be expanded. The proposed new Eskom supply will entail the following:

- The bulk mains electrical supply will be connected to the Eskom Grid via an overhead 11 000 Volt three-phase connection.
- The connection will be completed using two feeders, providing a degree of redundancy to the mains supply; this is per good engineering practice, where critical systems are connected.
- The two feeders will be connected to their Fisantekraal Substation. They will be routed to the site using 11 000-V open-conductor cables fixed to gum poles. The final routing of the Eskom connection will be confirmed later.
- The bulk electricity supply will terminate within the Cape Winelands Airport site, and this connection point will comprise an Eskom local substation, comprising the final overhead pole, overhead drop-out line-fuses, medium voltage 3-core cable connection to a metering substation fitted with dual outgoing feeder connections. All this outdoor equipment will be housed in a fenced/secure enclosure (likely 5000mm by 4000 mm).
- The Eskom supply will remain as a backup supply on-site to the solar/ biodigester energy supply.

Technology related to Waste Management – Disposal to landfill vs Biodigester:

Waste generated from operations on site will include general and recyclable waste. Waste separation at the source will allow recyclable waste to be disposed of at a local transfer station or picked up by licenced waste operators on-site. General and hazardous waste will be disposed of in a landfill (Vissershok landfill site) and transferred by road.

Waste will be stored on-site at a designated and managed point for a short period before collection and disposal to a landfill.

The biodigester can be combined with other sources of waste, including general organic waste. The on-site source of general waste will feed directly into the biodigester and contribute to generating energy from waste. The biodigester plant creates biogas, and the "waste" from the biodigester plant comprises "liquid fertilizer" which could be distributed to local farms.

Technology related to wastewater treatment and management – On-site treatment vs Disposal to CoCT:

Due to the CWA's proximity to the Fisantekraal WWTW, an option would be to install a pump station and an associated rising main that conveys the flows directly to the Fisantekraal WWTW to the North. Another option entails the construction of an on-site wastewater treatment plant. The intention is that the treated effluent is then re-used as non-potable water on the site for irrigation, in the biodigester and toilet flushing.

An internal network will collect sewage from the various buildings within the western precinct and convey it to a package treatment plant. The wastewater treatment plant will treat to a quality that meets the applicable limits. The treated effluent will be stored and reused on the site as a non-potable water supply.

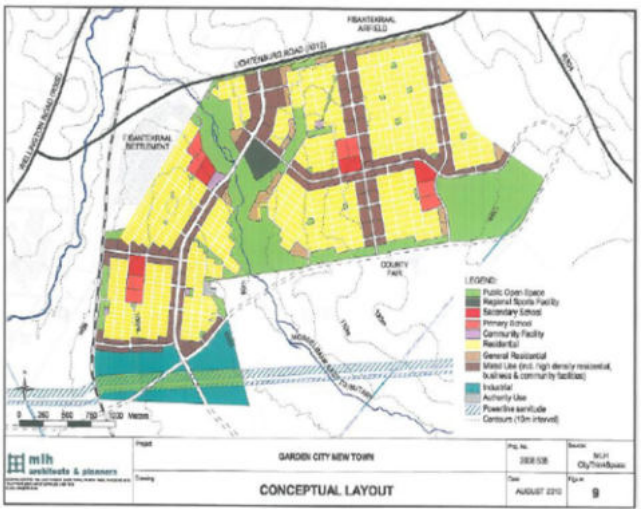
The biodigester can be combined with other sources of waste, including treated sewage. The treated sewage water could be suitable for feeding the biodigester plant. Treated biosolids from the WWTW can also be used in the biodigester if found non-hazardous.

The preferred option would be to construct an on-site WWTW and the connection to the Fisantekraal WWTW, which would be used in emergencies or during maintenance of the on-site WWTW.

2.6 Surrounding land uses

The site is bordered by the R312, with several agricultural activities towards the east and north (**Figure 7**). Peta's Place Equestrian Centre is located directly north of the CWA, whereas facilities linked to the Country Fair Laying Farms are directly west of the CWA. Further west and northwest are Dirt & Dust, Braam's Voerkrale and the Fisantekraal Wastewater Treatment Works. Southwest of the site is the Fisantekraal residential area, which includes the new Garden City development. There are also pockets of land northwest of the site previously used for sand mining. The following overview offers brief descriptions of some surrounding land uses.

The housing need in the area is partially addressed by the adjacent **Greenville Garden City,** a 767-ha town launched in March 2016 as a private/public partnership between the City, the Provincial Government and Garden Cities, a non-profit residential developer. The mixed-use development includes 16 000 high-density residential units, and business and community facilities. By October 2022, a total of 2 072 new BNG houses were occupied, and another 100 were earmarked for take-up in early 2023. Construction of the houses is staged to accommodate demand by first-time homeowners receiving Government grants to buy their own homes (https://gardencities.co.za/greenville/). In 2022, the Fisantekraal Centre for Development was opened as a skills training facility that helps unemployed people find jobs in various sectors.



H & A Planning, 2024

Figure 7: Land uses close to the Cape Winelands Airport
Source: Google Maps (2023)

The **Fisantekraal** settlement, southwest of the CWA site, had 12 369 residents per the 2011 Census, dominated by Black African (51,5%) and Coloured (46,9%) residents. It is home to primary and secondary schools, sports grounds, and several small businesses. The mainly low-income community battles with high unemployment and a growing informal settlement, with little prospect for work close to home. No more recent demographic data from the 2022 Census is available, and due to the serious limitations of the Census data, it is not considered credible as an indication of the population in the Fisantekraal area and surrounding area.

Peta's Place Equestrian Centre places a lot of emphasis on the horse and their health, from weighing horses and their food to professionals monitoring their physical and mental health. All horses live in camps with grazing, either in mixed or single-gender herds. The surrounding farmland is used as paths where wildlife can be seen on scenic horseback rides.

Braams Voerkrale is one of the largest feedlots in the Western Cape, with about 4 000 cattle. It is the largest covered cattle farm in South Africa, with 80% of the cattle fed on concrete floors. The cattle are auctioned/sold off to various abattoirs in the Western Cape.

Dirt and Dust is an off-road racetrack mainly for motorcycles, but it also facilitates 4x4 vehicles, quad bikes, and related vehicles. They offer rentals for using the dirt track and motorcycles and hold weekly races and/or tournaments.

Southeast of Dirt & Dust is **Goedgeleven,** a venue for weddings and other events that offers scenic farmland and a natural setting. A chapel is available for smaller weddings, while its reception hall can accommodate larger events, offering water and garden features, specialised catering and suite accommodation.

Other communities along the flight path proposed for CWA aircraft include the following:

Klipheuwel is a small rural village located 15 km north of Durbanville and 8 km north of the CWA site. In 2011, a population of 2 294 was registered, represented by 54% Black African and 38,6% Coloured residents.

Mikpunt is a smallholding community located about 6 km north of the CWA site, between the Mosselbank and Klapmuts Rivers, and home to the Klipheuwel public primary school.

Buh-Rein Estate is a lifestyle estate launched in 2010, and is estimated to be home to almost 12 000 new residents by 2022. Amenities include a family restaurant, clubhouse, swimming pool, open-air gym, 10 km jogging trail and a multi-functional sports field. Phase 2 retirement village offers 418 independent living and 43 assisted living apartments.

Joostenberg Vlakte is home to several smallholdings, bordered by the N1 on the south, Canary Road on the west, and Lucullus Road cutting north-south through the middle. The area is well-known for equestrian activities, but several other small goods and services businesses are operated from the smallholdings. The area north and east of the smallholdings is home to various farms that mainly produce fresh vegetables. However, in recent years, the full agricultural potential of the area has not been realised as farmers have to deal with trespassing, stock theft, break-ins and burglaries at premises, equipment theft and vandalism, the growing need for crop irrigation and the unreliable provision of electricity, among others. The ongoing uncertainty about future development in the area has discouraged landowners from investing in agricultural activities.

Although part of the City of Cape Town, **Kraaifontein** is still considered a town with its own central business district. It comprises several residential areas, i.e. Windsor Park, Scottsville, Peerless Park, Eikendal, Scottsdene, Bloekombos, Wallacedene, Belmont Park, Bonny Brook, and Uitzicht. The aircraft's flight path will pass over the eastern parts of Kraaifontein.

2.7 Other ongoing or proposed developments in the area

The Northern District has experienced significant development applications in recent years, with multiple developments approved or in the planning phase (**Figure 8**).

- Industrial and general business development on **Portion 13 of Farm 168 was approved in 2019, and Remainder Farm 180 and Portion 3 of Farm 180** in 2022. The latest proposal for the three erven includes a 135 867 m² GLA glass factory.
- Industrial development with a total GLA of 42,567 m² on **Erf 1690** has been approved.
- A 19 016 m² GLA industrial development on **Erven 1693 and 1870** is apparently in progress, while a Storage Facility with 6 100 units was proposed for **Portion 32 of Farm 168**.
- The **Groot Phesantekraal Phase 4** development was approved in 2019 and consists of three subphases (Phase 4.1, 4.2 and 4.3) that includes townhouses, retail, offices, medical, retirement village, school, higher education institute and student apartments (total GLA of 25 000 m^2).
- **Groot Phesantekraal Phase 5** includes a bulk trade centre, townhouses, arms dealership, office, nursery, shopping centre, fast food outlet and vehicle fitment centre (total GLA of 32 358 m^2).
- **La Piron** development on Portion 41 of Farm 725, designated for residential use, including single residential units and group housing.
- An Environmental Authorisation (EA) for the **Bella Riva Lifestyle & Golf Estate** was issued in January 2014, followed by a timeframe amendment that extended the EA until 10 April 2026. The initial EA authorised a mixed residential and lifestyle golf estate development that included an 18-hole golf course, 1000 subsidised housing, 2 069 dwelling units, Golf Estate Clubhouse and amenities, sports facilities and a sports academy, retail convenience centre, mixed-use lifestyle facility comprising an 80-room hotel with conference facilities, a gym and spa, a reconstructive clinic, schools (2 000 pupils) and crèches (500 children), public transport interchange and station near the Fisantekraal settlement and other relevant infrastructure.
- **Greenville Garden City** is a multi-phase mixed development that includes residential, business and community facilities. Phase 1-3 have been approved, and construction has commenced. Phase 4 and 5 will

involve completing the construction of the Lucullus Road southern extension and the east-west link road connecting to the Darwin Road extension. The rezoning of Greenville was approved on 7 December 2012. The City of Cape Town advised on 7 June 2022 when CWA requested a zoning certificate, that the rights on Erf 4 (Phase 4) had lapsed and the property reverted back to agricultural.

- The **Apollo Bricks** development on Portion 42 of Cape Farm 168 was approved for rezoning and subdivision in 2019, which entailed the development of an industrial park with a total GLA of 120 000 m².
- The **Durbanville Industrial** development application is in process (total GLA of 207 198 m²).

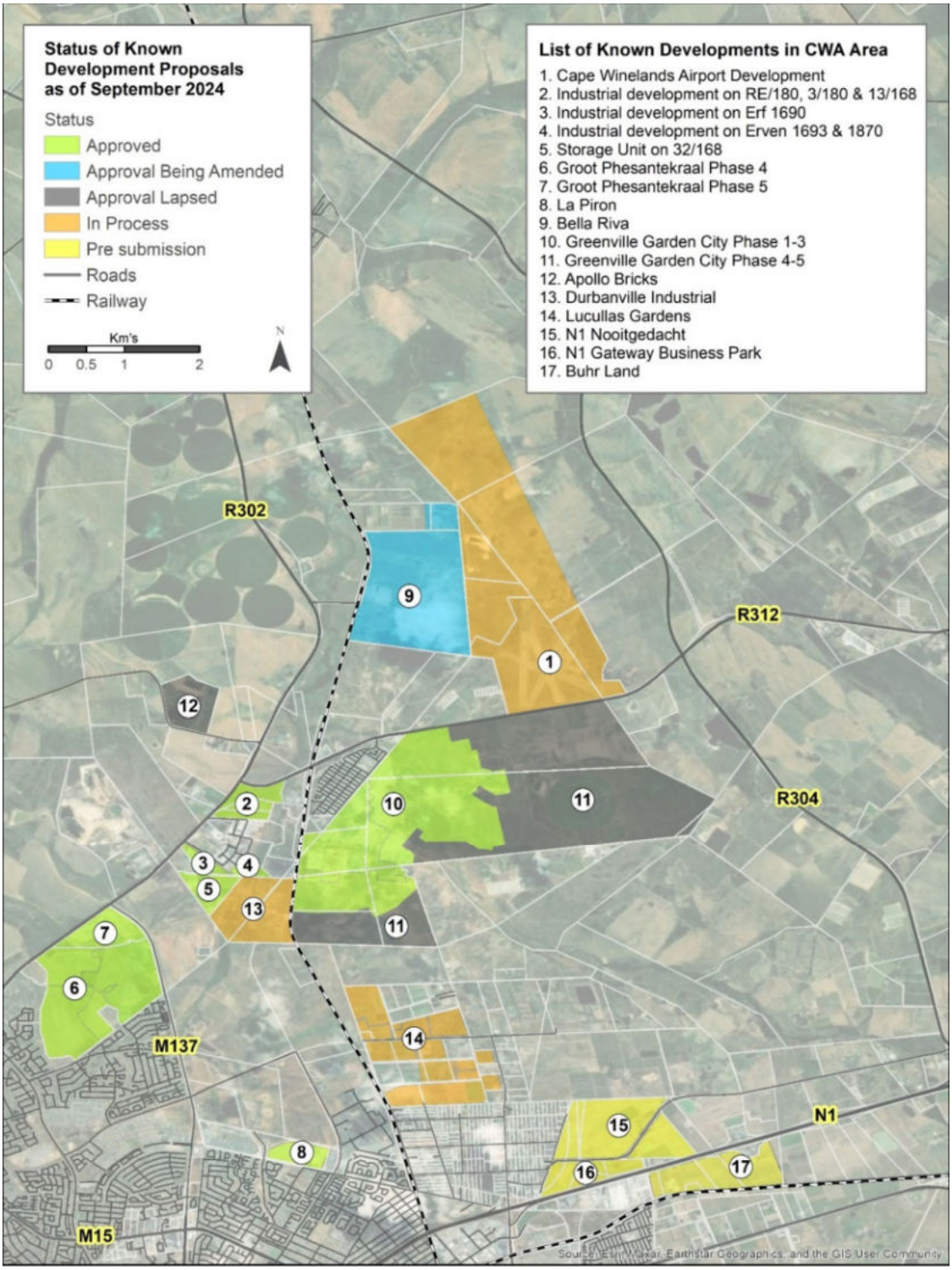


Figure 8: Other developments near the CWA site.
Source: H & A Planning, 2025

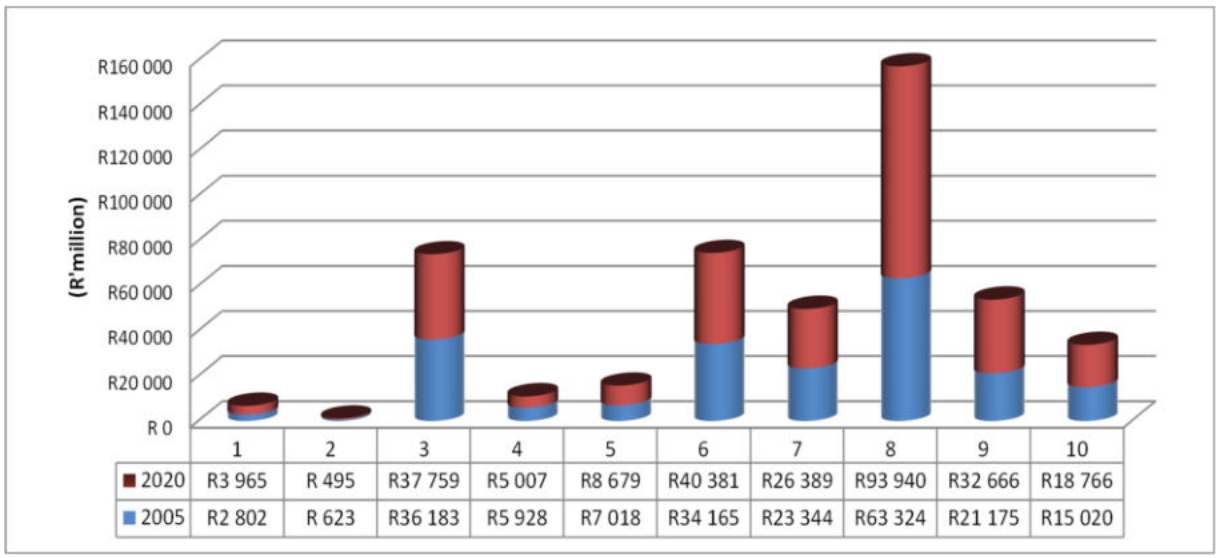
- The approved **Lucullus Gardens** mixed-used development on a number of the Joostenberg Vlakte smallholdings includes residential, business, retail, institutional (college, hospital, school, community facilities), industrial and life science (research) components, totalling 418 880 m^2 GLA and 2 525 residential units of 80 m^2 each.
- The **N1 Nooitgedacht** development application is in process. The land is designated for warehousing on Portion 373 and the Remainder Portion 4 of Farm 728 (total GLA 321 543 m^2).
- The **N1 Gateway Business Park** development is pending an amended EA and appeal. The land is designated as an industrial park, including warehousing and distribution, covering Portions 29, 30, 32, 374, 375, and 377 of Farm 728 (total GLA 144 526 m^2).
- The **Buhr Land** development application is in process for industrial development on Portions 27, 327, and 407 of Farm 728, with a total area of 49 hectares.

3 OVERVIEW OF THE CAPE TOWN AND WESTERN CAPE PROVINCE ECONOMIES

3.1 Overview

The COCT economy contributed approximately 72,00% to the economy of the Western Cape Province in 2020. In terms of absolute numbers, the COCT economy generated R268 048 million in GVA (Gross Value Added) at constant prices[5], relative to R372 308 million recorded for the Western Cape Province. The GVA contribution of the COCT economy to the Western Cape Province decreased from 72,98% in 2005 to 72,00% in 2020. The COCT economy grew off a solid base by 1,65% per annum from 2005 to 2020, or 27,89% over the 15 years, despite the impact of the COVID-19 pandemic.

Figure 9 indicates the sector contributions to the GVA of the COCT economy for 2005 and 2020. The largest sector of the COCT economy was Finance, Insurance, Real Estate and Business Services sector, followed by Wholesale and Retail and Manufacturing. Combined, these three sectors contributed almost 64,20% of the total GVA generated by the COCT economy in 2020, an increase of 0,65% from 2005. The Finance, Insurance, Real Estate and Business Service sector has remained the largest contributor to the COCT GVA over the 15 years of the analysis. The Manufacturing sector's contribution decreased from 17,26% in 2005 to 14,09% in 2020, whereas Finance, Insurance, Real Estate and Business Services increased their contribution to GVA from 30,21% in 2005 to 35,05% in 2020.



	1	2	3	4	5	6	7	8	9	10
2020	R3 965	R 495	R37 759	R5 007	R8 679	R40 381	R26 389	R93 940	R32 666	R18 766
2005	R2 802	R 623	R36 183	R5 928	R7 018	R34 165	R23 344	R63 324	R21 175	R15 020

Figure 9: An illustration of the GVA contributions per sector for the COCT economy in 2005 and 2020

Legend:

1	Agriculture, hunting, forestry and fishing	6	Wholesale and retail
2	Mining and quarrying	7	Transport, storage and communication
3	Manufacturing	8	Finance, insurance, real estate and business services
4	Electricity, gas and water supply	9	Community, social and personal services
5	Construction	10	Government Services

Source: Adapted from data provided by Quantec Research, 2021

[5] Gross Value Added (GVA) and Gross Geographic Product (GGP) or Gross Regional Product (GRP) are very similar concepts. GVA excludes taxation and subsidies, whereas GDP includes these items. GVA is analysed using current prices.

To understand whether sectors are contracting or growing, it is useful to consider the overall and annual growth rates and to compare those to the Western Cape Province within which the COCT economy functions. **Figure 10** indicates the annual compounded growth rates per economic sector for the COCT and Western Cape Province from 2005 to 2020.

The Western Cape Province and Cape Town economies grew in nominal terms by 1,75% and 1,65% per annum, respectively, from 2005 to 2020 (refer to Total data in **Figure 10**). The Agriculture, Hunting, Forestry and Fishing, and Community, Social and Personal Services sectors in the COCT economy achieved higher growth rates than the province from 2005 to 2020.

The Agriculture, Hunting, Forestry and Fishing, Finance, Insurance, Real Estate and Business Services, and General Government sectors demonstrated the highest annual growth rates for the COCT from 2005 to 2020. Although the Manufacturing sector grew only by 0,28% per annum between 2005 and 2020, its contribution to GVA declined by 18,41% from 2005 to 2020.

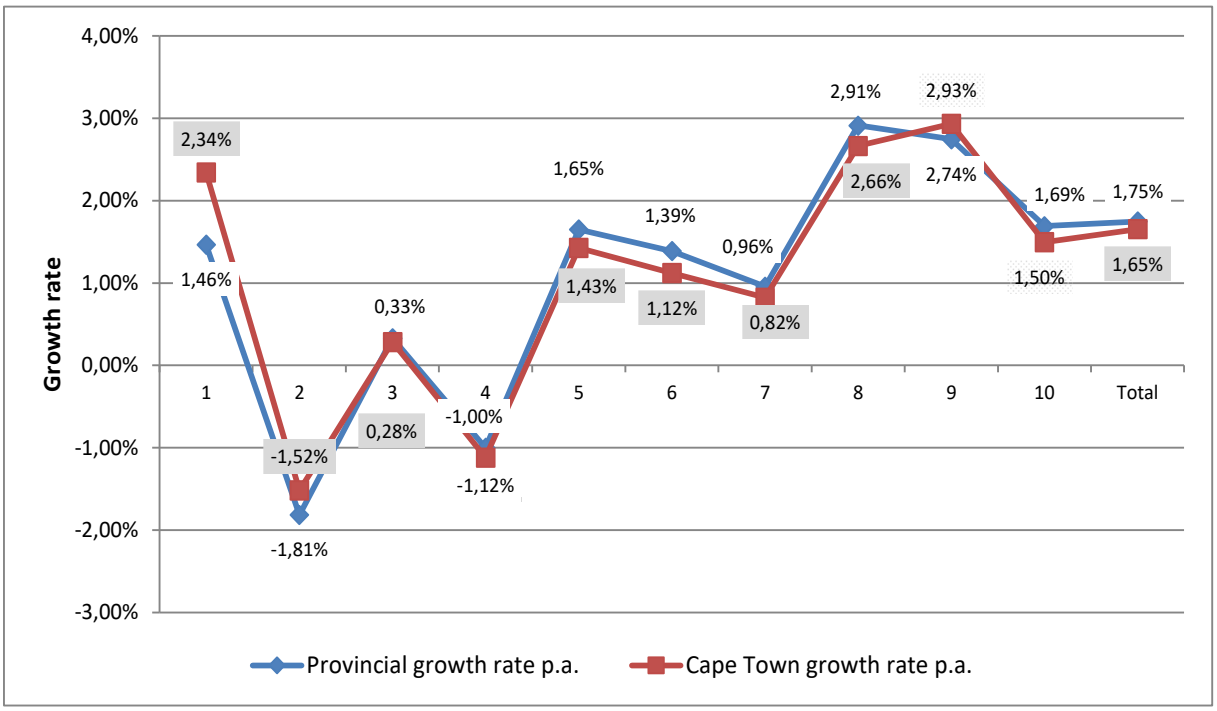


Figure 10: An illustration of the annual nominal growth rates per economic sector for Cape Town and the Western Cape Province from 2005 to 2020

Legend:

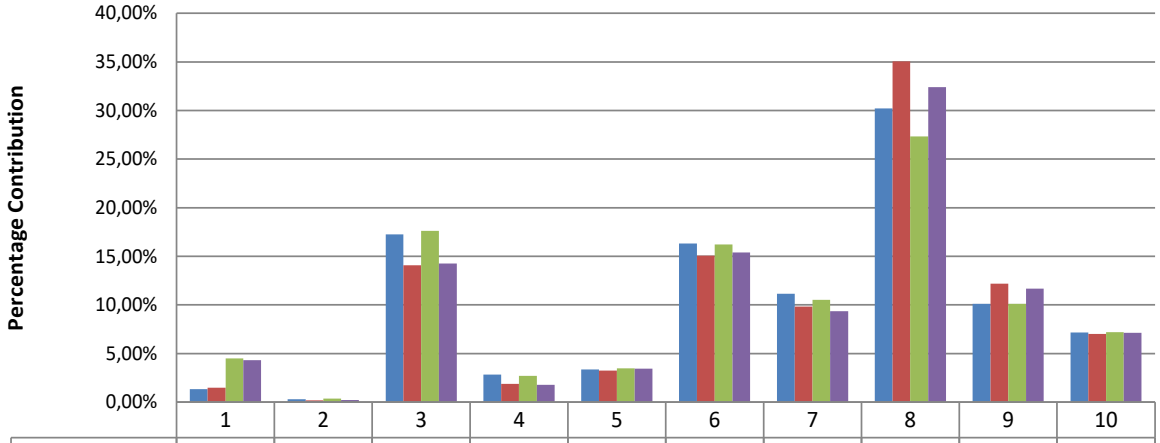
1	Agriculture, hunting, forestry and fishing	6	Wholesale and retail
2	Mining and quarrying	7	Transport, storage and communication
3	Manufacturing	8	Finance, insurance, real estate and business services
4	Electricity, gas and water supply	9	Community, social and personal services
5	Construction	10	Government Services

Source: Adapted from data provided by Quantec Research, 2021 and own calculations

3.2 Sector analysis of GVA contributions

Figure 11 indicates the contribution of each economic sector to the GVA of the COCT and the Western Cape Province economy for 2005 and 2020. An assessment of the larger sectors suggests that the contribution of several of the

sectors (such as Wholesale and Retail and Transport, Storage and Communication) declined slightly in the COCT economy from 2005 to 2020 in favour of Finance, Insurance, Real Estate and Business Services, which increased its contribution to GVA of the COCT economy by 16.02% over the period, and Community, Social and Personal Services, which increased its contribution by 20.69%. The Manufacturing sector showed a decline in its contribution to GVA, i.e. 17,26% (2005) compared to 14,09% (2020). The contribution of the sectors to GVA in the COCT and the Western Cape Province remained more or less in the same proportions whether the sector contribution increased or declined. This is to be expected since the COCT contributes 72% to the GVA of the Western Cape Province.



	1	2	3	4	5	6	7	8	9	10
Local 2005	1,34%	0,30%	17,26%	2,83%	3,35%	16,30%	11,14%	30,21%	10,10%	7,17%
Local 2020	1,48%	0,18%	14,09%	1,87%	3,24%	15,06%	9,84%	35,05%	12,19%	7,00%
Province 2005	4,49%	0,37%	17,61%	2,70%	3,49%	16,23%	10,51%	27,32%	10,09%	7,20%
Province 2020	4,31%	0,21%	14,27%	1,79%	3,44%	15,40%	9,35%	32,41%	11,68%	7,14%

Figure 11: Sector contributions to GVA for the COCT and Western Cape Provincial economies in 2005 and 2020

Legend:

1	Agriculture, hunting, forestry and fishing	6	Wholesale and retail
2	Mining and quarrying	7	Transport, storage and communication
3	Manufacturing	8	Finance, insurance, real estate and business services
4	Electricity, gas and water supply	9	Community, social and personal services
5	Construction	10	Government Services

Source: Adapted from data provided by Quantec Research, 2021 and own calculations

A synopsis of the data presented in **Figure 11** suggests that three sectors increased their contribution to GVA of the COCT economy, while seven sectors indicated a declining contribution. The trend emerging across the Province is similar with only two sectors increasing their GVA contribution to the Province economy, i.e. Finance, insurance, real estate and business services and Community, social and personal services. The concern with this trend is the reduced employment levels within the more labour-intensive sectors of the economy. A greater focus on sectors with a service orientation has emerged over the 15 years of the analysis, which are invariably low employment creators compared to construction and manufacturing.

The assessment of GVA sector contributions to the COCT together with the annual and period growth rates for 2005 and 2020 are indicated in **Table 1**. Among the 10 classified sectors, eight sectors indicated an annual increase in economic activity with the minor economic sectors of Mining and Quarrying and Electricity, Gas and Water Supply indicating a year-on-year decline from 2005 to 2020. The declining trend in the Manufacturing sector's contribution to GVA (14,09% in 2020 versus 17,26% in 2005) is concerning due to the labour-intensive nature of the industries that generally form part of this sector. The analysis also demonstrates that the Manufacturing sector is declining in favour of increases in Finance, Insurance, Real Estate and Business Services and Community, Social and Personal Services, which alludes to a greater focus on service orientation.

Table 1: An assessment of sector contributions to GVA in 2005 and 2020 and annual growth rates for the COCT economy

Economic sector (R'million)	Gross Value Added				Growth for	Annual	Direction
	2005	% of total	2020	% of total	Period	growth	of growth
Agriculture, hunting, forestry and fishing	2 802	1,34%	3 965	1,48%	41,50%	2,34%	
Mining and Quarrying	623	0,30%	495	0,18%	-20,49%	-1,52%	
Manufacturing	36 183	17,26%	37 759	14,09%	4,36%	0,28%	
Electricity, gas and water supply	5 928	2,83%	5 007	1,87%	-15,53%	-1,12%	
Construction	7 018	3,35%	8 679	3,24%	23,66%	1,43%	
Wholesale and retail	34 165	16,30%	40 381	15,06%	18,19%	1,12%	
Transport, storage and communication	23 344	11,14%	26 389	9,84%	13,05%	0,82%	
Finance, insurance, real estate and business services	63 324	30,21%	93 940	35,05%	48,35%	2,66%	
General government	21 175	10,10%	32 666	12,19%	54,27%	2,93%	
Community, social and personal services	15 020	7,17%	18 766	7,00%	24,94%	1,50%	
Total	209 582	100,00%	268 048	100,00%	27,90%	1,65%	

Source: Adapted from data provided by Quantec Research, 2021 and own calculations

The **primary sector** of the COCT economy includes Agriculture, Hunting, Forestry and Fishing activity and Mining and Quarrying. The primary sector contributed 1,66% to the GVA of the COCT economy in 2020, slightly up from 1,64% in 2005. Agriculture is the largest contributor to the GVA of the primary sector, with a sector contribution of 81,81% in 2005 and an increase of 88,89% in 2020.

The **secondary sector** of the COCT economy includes Manufacturing, Construction and Electricity, Gas and Water Supply. The secondary sector contributed 23,44% to the GVA of the COCT economy in 2005, while the contribution to GVA decreased to 19,99% in 2020. The contribution of the Manufacturing sector to the secondary sector GVA decreased from 73,64% in 2005 to 73,39% in 2020.

The **tertiary sector** of the COCT economy includes Trade, Repairs and Hospitality, Financial Institutions, Real Estate and Business Services; Community, Social and Personal Services; and Government Services. The tertiary sector contributed 74,92% to the GVA of the COCT economy in 2005; this increased to 79,14% in 2020. Government Services are included as part of the tertiary sector for the analysis. The analysis suggests that the contribution of Government Services to the GVA of the tertiary sector increased from 13,48% in 2005 to 15,39% in 2020.

3.3 General employment trends

A comparison of total employment indicates that the COCT contributed 62,58% to the total employment of the Western Cape Province in 2020. Overall employment increased by 33,01% in the COCT economy from 2001 to 2020. The primary, secondary and tertiary sectors contributed 2,73%, 16,81% and 80,46%, respectively, to total employment in the COCT economy in 2020. In comparison, the Western Cape Province enjoyed total employment contributions of 10,08%, 15,54% and 74,39% from the primary, secondary and tertiary sectors, respectively.

The strong growth in the tertiary sector was offset by negative and low growth in employment in the primary and secondary sectors, respectively, of the COCT economy. Strong employment growth was recorded in the tertiary sector, with an increase of 44,93% from 2001 to 2020, or an annual compounded growth of 1,97% annually. The Western Cape Province experienced similar trends, with a decline of 27,55% recorded for the primary sector, and increases of 5,56% and 52,90% for the secondary and tertiary sectors, respectively.

In terms of employment growth by sector in the COCT and specified periods pre-2008, 2008 - 2011 and post-2011, it is clear that the tertiary sector shed the fewest jobs with a decline of 0,39% from 2008 to 2011 (**Figure 12**). The secondary sector and primary sector of the economy shed jobs with declines of 16,21% and 9,01%, respectively, over the period 2008 to 2011. Post-2011, all three sectors clawed back all or some of the lost employment in the previous period, achieving an increase in employment of 13,89%, and 8,95% over the period 2012 to 2020 for the primary and tertiary sector, respectively. However, the secondary sector had not recovered all the employment lost

during the recessionary period by 2020, which is a concern as stated previously, with specific reference to the labour-intensive industries.

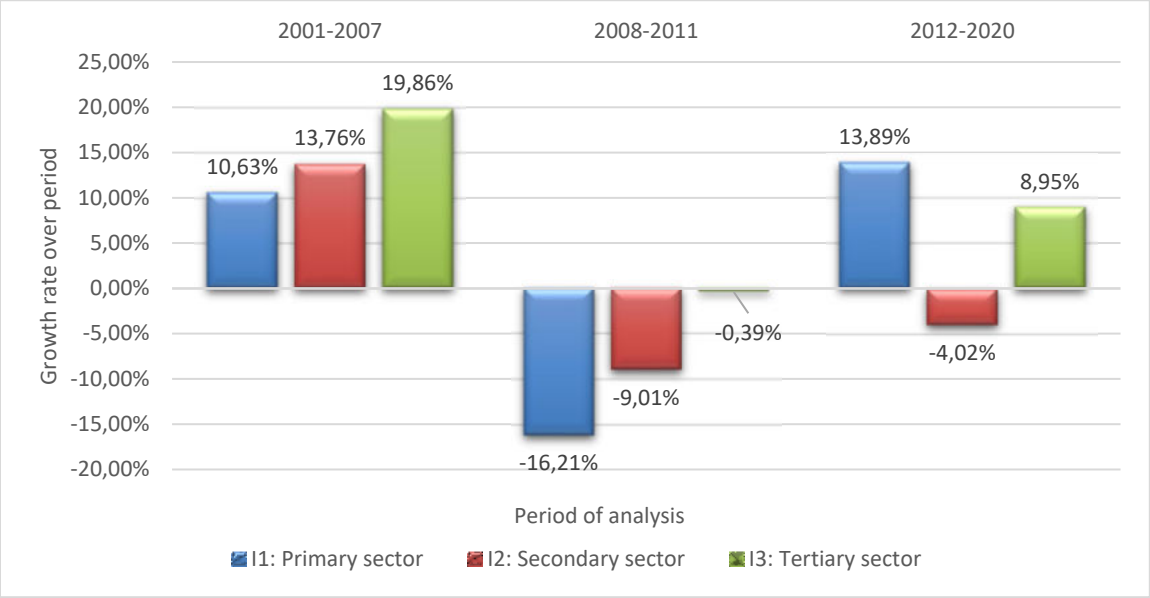


Figure 12: An illustration of the employment growth in the COCT for three specified periods (pre-recession, recession and post-recession) from 2001 to 2020

Source: Quantec, 2021 and own calculations

4 SOCIO-ECONOMIC AND DEMOGRAPHIC PROFILE OF THE POPULATION WITHIN THE STUDY AREA

4.1 Aligning the study area and available statistics

The approach adopted for the preparation of the socio-economic and demographic profile of communities surrounding the site of the Cape Winelands Airport entailed the specification of concentric circles representing areas within 10 km and 20 km from the centre of the site designated for the project. This approach was used due to the need to ascertain the relative proximity of communities to the development site to understand the geographical impact of the location on residents and economic activity in the study area. The choice of radii for 10 km and 20 km is based on our observations of population distribution, economic activities and likely sources of procurement in the areas surrounding the site of the CWA. We believe that this approach will offer a more realistic socio-demographic and economic profile of the population most likely to be affected by the development of industries in the area.

Figure 13 accurately indicates the different concentric zones as applied to the municipal area with an exact indication of the proposed location for the development. To include the larger population of the study area, the assessment covers the 59 sub-places (SP) primary within the Cape Metro, and within 10 km of the site. A total of 288 sub-places are within 20 km of the site, including those within the 10 km radius and sub-places in the Stellenbosch and Drakenstein Municipal areas. Where applicable, the analysis considers several socio-demographic characteristics of the population as determined by Statistics South Africa. The statistics for the different zones are based on the identified sub-places as defined by Statistics South Africa in the 2011 Population Census Survey.

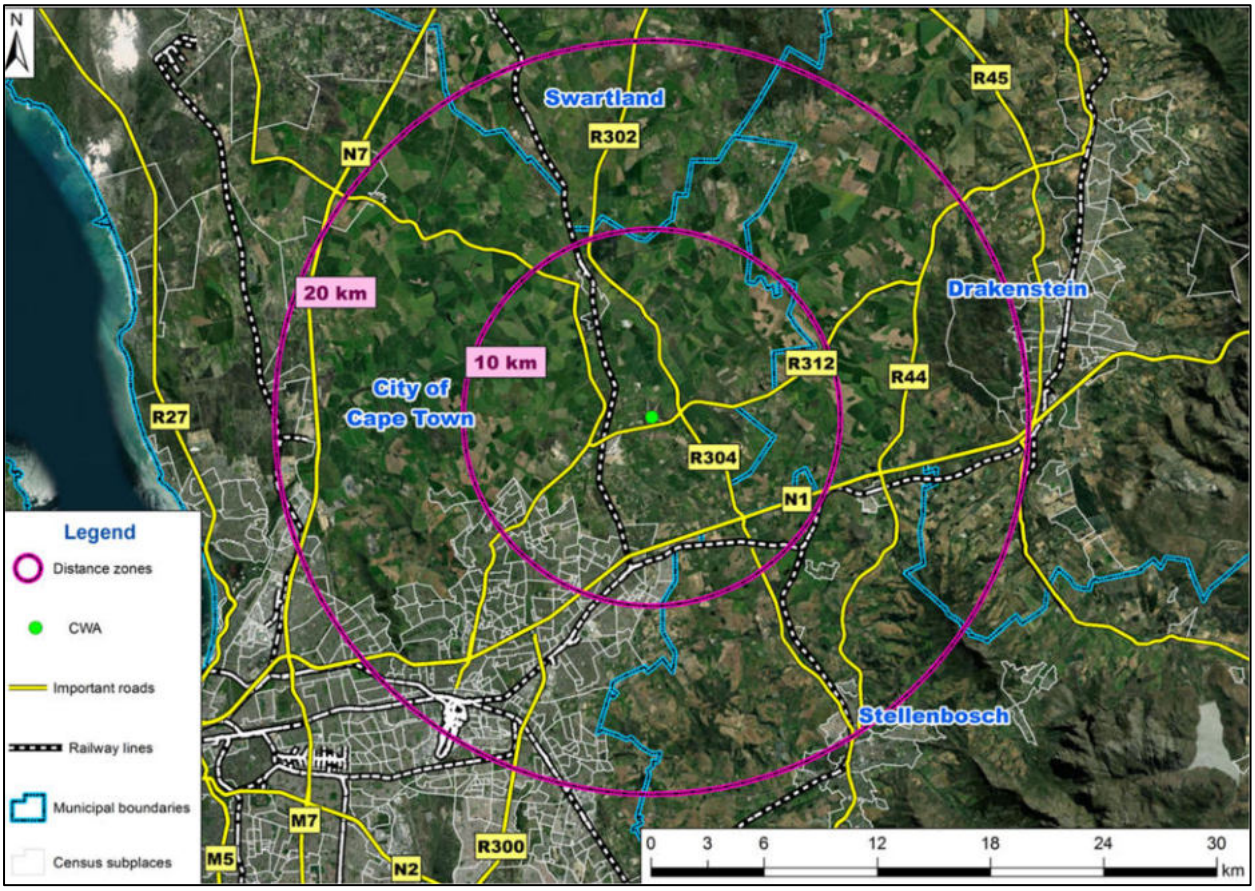


Figure 13: Different concentric zones using the site of CWA a central point
Source: Prepared from GIS data (Statistics South Africa), 2023

4.2 Socio-demographic profile of the study area population

The following socio-demographic profile of the study area is based on data from the 2011 National Population Census Survey (Statistics South Africa, 2013). A summarised socio-demographic profile is presented in **Table 2** for the 2011 census year.

An analysis based on the specified concentric zones suggests that 31,22% of the population residing within 20 km of the proposed site, live within 10 km of the site. An assessment based on the population groups suggests that 36,22% of the population that reside within 20 km of the site are White, 30,86% are Coloured and 30,02% are Black African. Within the 10 km zone, 41,73% of the total population are Black African, 28,45% are Coloured and 27,71% are White residents.

It is also noteworthy that the age group under 15 years represents the largest group within both 10 km and 20 km from the site. The age group above 65 years is the smallest for both zones, which confirms that few retirees are residing in this area.

Table 2: A socio-demographic profile of the study area based on the 2011 Census Survey

		Cape Town: Northern District, Drakenstein, Stellenbosch			
		Within 10 km		**Within 20 km**	
Population:	Black African	72 594	41,73%	167 283	30,02%
	Coloured	49 485	28,45%	171 988	30,86%
	Asian	860	0,49%	5 304	0,95%
	White	48 198	27,71%	201 835	36,22%
	Other	2 825	1,62%	10 884	1,95%
	Total	**173 963**	**100,00%**	**557 294**	**100,00%**
Gender:	Male	86 390	49,66%	272 384	48,88%
	Female	87 573	50,34%	284 910	51,12%
	Total	**173 963**	**100,00%**	**557 294**	**100,00%**
Age classification:	0 - 14	44 266	25,45%	123 811	22,22%
	15 - 24	30 388	17,47%	93 654	16,81%
	25 - 34	37 775	21,71%	112 276	20,15%
	35 - 44	27 393	15,75%	85 195	15,29%
	45 - 54	16 486	9,48%	62 962	11,30%
	55 - 64	9 738	5,60%	41 403	7,43%
	65 - 120	7 917	4,55%	37 993	6,82%
	Total	**173 963**	**100,00%**	**557 294**	**100,00%**

Source: Adapted from Statistics South Africa (2013)

4.3 Analysis of the study area population

The combined population of the Northern and Tygerberg Districts was 851 516 in 2001 and 1 018 554 in 2011, representing an average annual growth of 1,96% (Statistics South Africa, 2003; 2013). **Table 3** indicates the population distribution of residents within 10 km and 20 km of the site relative to the Northern District, Drakenstein and Stellenbosch population for 2011. The findings suggest that 8,75% of the population live within 10 km of the proposed development site and 74,24% live within 20 km. An analysis of the breakdown per population group

suggests that Black African and Coloured residents living within 10 km of the site comprise 22,08% and 6,02% of the total Northern District, Drakenstein and Stellenbosch population, respectively.

Table 3: Breakdown of the population by population group for the study area (within 10 and 20 km) as a percentage of the Northern District, Drakenstein and Stellenbosch populations in 2011

	Black African	Coloured	Asian	White	Total
Within 10 km	36 434	14 199	108	756	52 151
Within 20 km	120 972	149 357	2 982	163 018	442 279
Northern District, Drakenstein, Stellenbosch population	**165 006**	**235 927**	**3 613**	**183 871**	**595 777**
Percentage within 10 km	22,08%	6,02%	2,99%	0,41%	8,75%
Percentage within 20 km	73,31%	63,31%	82,54%	88,66%	74,24%

Source: Adapted from Statistics South Africa (2013)
*A category referring to Other is excluded
Note: Paarl/Wellington, Stellenbosch Town and Northern District

A discussion of key socio-demographic profile characteristics (population, education and age levels) is provided in the following sections, based on data from the 2011 South African Census (Statistics South Africa, 2013).

4.4 Analysis of education levels

An analysis of education levels in the study area for 2011 is provided in **Table 4**. The results indicate that 3,28% of persons living within 10 km of the site had no schooling (including those under the school age), whereas 2,55% of the population within 20 km of the site had no schooling in 2011. The assessment further suggests that 79,21% of persons living within 20 km of the site received Grade 1 to Grade 12 schooling, whereas 20,79% obtained Matric with a higher diploma or degree qualification.

Table 4: An analysis of education levels for the population per specified zone in 2011

Education category	Within 10 km	Within 20 km
No schooling	5 060	12 492
Some primary	32 334	83 420
Completed primary	7 751	19 838
Some secondary	51 627	142 788
Grade 12/Std 10	37 209	129 397
Higher	20 133	101 832
Total	**154 114**	**489 767**

Notes: N/A are excluded together with unspecified
Source: Statistics South Africa (2013)

4.5 Analysis of age levels

An analysis of the age levels among the population within 10 km and 20 km indicates the population that could be considered economically active, i.e. persons between the ages of 14 and 65. The illustration provided in **Figure 14** indicates that 25,45% and 22,22% of the population within 10 km and 20 km of the development site are below 15 years of age, respectively. Our analysis also suggests that 70,00% of the population within 10 km of the site are in the working-age category between 14 and 65 years of age, while the working group within 20 km of the site

represents 70,96% of the total population. The assessment indicates that every 2,33 persons who would normally be considered economically active (i.e. between 14 and 65 years of age) could support another person that is not economically active within 10 km of the site. The latter is comparable to the dependency ratio of 2,44 for the population residing within 20 km of the site.

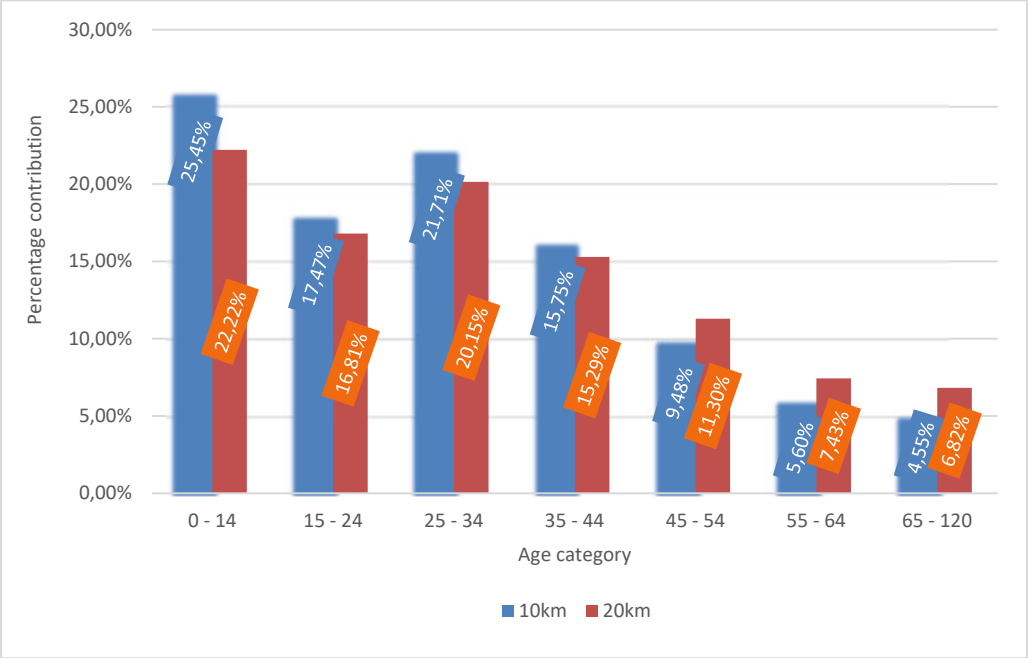


Figure 14: An assessment of percentage contributions to age levels per identified zone for 2011
Source: Compiled from data provided by Statistics South Africa (2013)

A more detailed assessment of the population presented in **Table 5** suggests that the Black African population group younger than 15 years represents 11,80% of the total population living within 10 km of the site proposed for development. Coloured and White residents under 15 years of age represent 8,03% and 5,18% of the total population within 10 km. An analysis of dependency factors suggests that among the White population residing within 10 km of the site, 2,48 persons that have the potential to be economically active could support another person not considered to be in an age category that represents an economically active person, i.e. younger than 15 years and older than 64 years of age. The dependency figures for the Coloured and Black African residents are 2,09 and 2,38, respectively.

Table 5: An assessment of age levels among residents in the zones in 2011 by population group

Age category	0 - 14	15 – 24	25 – 34	35 - 44	45 - 54	55 - 64	65 - 120	Total
Within 10 km								
Black African	20 522	15 778	18 930	10 362	4 371	1 690	942	**72 595**
Coloured	13 974	8 520	8 280	7 460	5 866	3 334	2 052	**49 486**
Indian/Asian	183	162	193	152	89	48	32	**859**
White	9 009	5 330	9 442	9 008	6 007	4 569	4 833	**48 198**
Other	578	597	930	411	154	97	59	**2 826**
Grand Total	**44 266**	**30 387**	**37 775**	**27 393**	**16 487**	**9 738**	**7 918**	**173 964**

Age category	0 - 14	15 – 24	25 – 34	35 - 44	45 - 54	55 - 64	65 - 120	Total
Within 20 km								
Black African	43 907	34 863	46496	23 787	10 518	4 516	3 195	**167 282**
Coloured	43 959	30 214	29 102	25 777	21 842	12 839	8 256	**171 989**
Indian/Asian	1 059	953	1 144	924	666	354	204	**5 304**
White	32 465	25 684	32 424	33 124	29 029	23 200	25 910	**201 836**
Other	2 420	1 941	3 110	1 583	906	494	429	**10 883**
Grand Total	**123 810**	**93 655**	**112 276**	**85 195**	**62 961**	**41 403**	**37 994**	**557 294**

Note: A category referring to other is excluded
Source: Statistics South Africa (2013)

4.6 Analysis of household income levels

Table 6 provides the income ranges for households as defined by the specified radii from the centre of the site proposed for development. Note that not all the respondents disclosed their income. Of those that did disclose their income, 15,43% of the households residing within 10 km of the proposed development had no income, and 42,30% earned less than R76 801 per annum (excluding households with no income). Within 20 km of the development, 13,47% of the households did not have an income, 33,54% of the households had an annual income of less than R76 801, whereas 8,52% of households declared an income of more than R614 400 per annum.

Table 6: Distribution of annual household income for each specified zone in 2011

Income category	Within 10 km		Within 20 km	
No income	7 762	15,43%	23 357	13,47%
R1 - R4 800	1 492	2,97%	3 307	1,91%
R4 801 - R 9 600	2 076	4,13%	4 662	2,69%
R9 601 - R 19 200	4 794	9,53%	11 831	6,82%
R19 201 – R 38 400	7 180	14,27%	19 385	11,18%
R38 401 – R 76 800	5 742	11,41%	18 959	10,94%
R76 801 – R153 600	5855	11,64%	22 883	13,20%
R153 601 - R307 200	6 622	13,16%	28 368	16,36%
R307 201 - R614 400	5 957	11,84%	25 858	14,91%
R614 401 - R1 228 800	2 252	4,48%	11 144	6,43%
R1 228 801 - R2 457 600	358	0,71%	2 399	1,38%
R2 457 601 and more	223	0,44%	1 220	0,70%
Grand Total	**50 313**	**100,00%**	**173 373**	**100,00%**

Note: Excluded is a category of unspecified
Source: Adapted from Statistics South Africa (2013)

4.7 Employment and skills level analysis

A perspective of employment for the different zones within the Northern District, Drakenstein and Stellenbosch is provided in **Table 7** with specific reference to the number of employed, unemployed and not-economically active persons per population group.

Table 7: An assessment of employment by population group for 2011 based on specified radii from the site proposed for development

Category of employment	Black African	Coloured	Indian/ Asian	White	Other	Grand Total
Within 10 km:						
Employed	23 555	18 991	394	25 405	1 465	**69 810**
Unemployed	11 542	3 655	33	1 110	237	**16 577**
Not economically active	16 033	10 814	216	7 841	488	**35 392**
Total	**51 130**	**33 460**	**643**	**34 356**	**2 190**	**121 779**
Dependency ratio per population group	***0,85***	***1,31***	***1,58***	***2,84***	***2,02***	***1,34***
Within 20 km						
Employed	57 027	68 214	2461	103 108	4 927	**235 737**
Unemployed	24 689	10 815	157	4 319	913	**40 893**
Not economically active	38 464	40 744	1423	36 033	2 194	**118 858**
Total	**120 180**	**119 773**	**4041**	**143 460**	**8 034**	**395 488**
Dependency ratio per population group	***0,90***	***1,32***	***1,56***	***2,56***	***1,59***	***1,48***

Note: Not applicable excluded. Not economically active includes Discouraged work-seeker, Other not economically active, and Age < 15 years
Source: Statistics South Africa (2013)

Table 7 indicates that 57,33% of the total population residing within 10 km of the site is employed, while 59,61% within 20 km are employed. The proportion of employed for the White, Coloured and Black African groups within 20 km is 71,87%, 56,95% and 47,45% of the total population group, respectively.

An assessment of the dependency ratios for the zones is based on the premise that for each person who is employed, a factor of people is unemployed or economically inactive. The findings of the research for each of the zones suggest a dependency ratio of 1,34 and 1,48 for the total population within 10 km and 20 km, respectively. This implies that every employed resident has to support less than one unemployed or economically inactive person residing within 20 km. The ratio for the White and Black African population groups within 10 km of the site is 2,56 and 0,90, respectively.

4.8 Formal and informal sector employment

A further assessment of employment levels is provided by economic sector and by population group for the population residing within 10 km and 20 km from the designated site. The findings presented in **Table 8** indicate the percentage employed per population group for the specified zones, with 29,28% of employed people within 20 km residing within 10 km of the site. The formal sector employs 84,10% of the economically active population within 20 km, followed by the informal sector with 8,36%. Our assessment also suggests that 81,04% of the employed people within 10 km of the site are working in the formal sector, whereas 10,51% within 10 km of the site are working in the informal sector.

Table 8: Classification of employment per economic sector, industry and population group in 2011 for 10 km and 20 km from the sites proposed for the development

Sector	Within 10 km	Percentage Within 10 km	Within 20 km	Percentage within 20 km
Formal sector employment				
Black African	17 123	24,74%	42 857	18,13%
Coloured	15 386	22,23%	58 087	24,57%
Indian or Asian	334	0,48%	2 158	0,91%
White	22 231	32,12%	92 045	38,94%
Other	1 020	1,47%	3 648	1,54%

Sector	Within 10 km	Percentage Within 10 km	Within 20 km	Percentage within 20 km
Informal sector employment				
Black African	3 340	4,83%	7 005	2,96%
Coloured	1 969	2,84%	5 014	2,12%
Indian or Asian	27	0,04%	150	0,06%
White	1 715	2,48%	6 949	2,94%
Other	221	0,32%	656	0,28%
Private households				
Black African	2 444	3,53%	6 112	2,59%
Coloured	1 522	2,20%	4 986	2,11%
Indian or Asian	32	0,05%	138	0,06%
White	1 683	2,43%	6 019	2,55%
Other	173	0,25%	568	0,24%
Total	**69 220**	**100,00%**	**236 392**	**100,00%**

Note: Excluded from the figures above are categories for Do not know, Unspecified, Not applicable
Source: Adapted from Statistics South Africa (2013)

5 FEASIBILITY OF THE PROJECT AND FIT WITH SPATIAL PLANNING

5.1 Need and desirability

The Department of Environmental Affairs (2014) issued a Guideline on Need and Desirability with a list of questions that should be addressed when considering a proposed development. The concept of "need and desirability" relates to, amongst others, the nature, scale and location of the proposed development and the wise use of land. Essentially, "need" primarily refers to time and "desirability" to place (i.e., is this the right time and the right place for the type of land use/activity being proposed?). The "need and desirability" requires the consideration of the strategic context of the development proposal along with the broader societal needs and the public interest. While the financial viability considerations of the private developer might indicate if a development is "do-able", the "need and desirability" will be determined by considering the broader community's needs and interests as reflected in an IDP, SDF and EMF for the area. Although job creation and economic growth are important, the specific needs of the broader community should be considered together with the opportunity costs[6] and distributional consequences to determine whether the development will be socially, economically and environmentally sustainable.

The CWA is located approximately 10,5 km northeast of Durbanville and 25 km northeast of Cape Town International Airport (CTIA). The Morningside Airfield, Ysterplaat Airforce Base and Stellenbosch Flying Club are all located within 30 km of the CWA (Cape Winelands Airport Limited, 2021b). The CWA is located between the three major regional growth centres of Cape Town, Stellenbosch and Drakenstein and along north-south and east-west road networks, and can thus effectively serve businesses and the tourism industry in the Western Cape (**Figure 15).** This provides opportunities for transport-related development supported by other transport services (public transport, rental cars, etc.) and complementary commercial services. The CWA will also serve as a multimodal transport hub given its strategic location near the Saldanha-linked Mellish Station (Rail) and only a few kilometres from the N1 highway, enabling efficient sea-rail-road-air linkages (Cape Winelands Airport Limited, 2022).

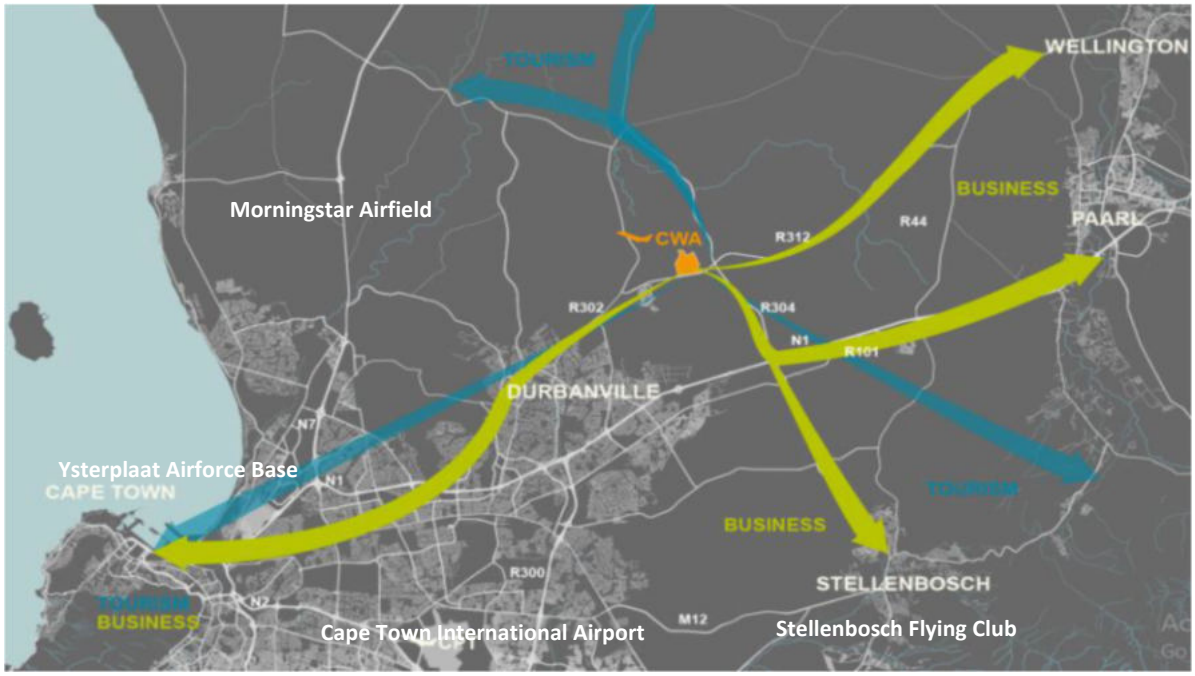


Figure 15: Location of the proposed Cape Winelands Airport relative to other local airfields.
Source: Cape Winelands Airport Limited (2021a)

[6] Opportunity cost refers to the cost that is forgone by choosing a specific investment opportunity as opposed to alternative opportunity.

The aviation sector is broad and complex, with multiple unique, heterogeneous sub-sectors within it, each facing unique constraints and inefficiencies. Cape Winelands Airport Limited (2022) indicates that the CWA will fulfil numerous key roles within the aviation sector, addressing these constraints and efficiencies and improving the socio-economic landscape within the region by performing and/or facilitating the following functions, as detailed in Section 2.4:

1. CWA's complementary role as General Aviation Hub.
2. CWA's complementary role as an Operational Alternate Aerodrome (Diversion Airport)
3. CWA's role as an enabler for growth in Scheduled Commercial Services
4. CWA's complementary role as a Reliever Airport
5. Commercial Development

H & A Planning (2024) raised several points for consideration related to the "**Appropriateness of Timing**". This included contributing to economic growth and maintaining a competitive advantage by having a diversified aviation infrastructure to cater to multiple aviation needs while alleviating capacity constraints at major hubs. The report concluded that the proposed development of CWA is more time-efficient and cost-effective than building a new airport. The development would contribute to infrastructure development, with existing roads, power, water, and telecommunication infrastructure that can be augmented also to benefit the surrounding area. Multiple airports enhance resilience during natural disasters or emergencies, ensuring business continuity and supporting regional disaster recovery. As a diversion airport, CWA simultaneously mitigates risk and potential economic losses. Furthermore, CWA's master plan fulfils all the requirements to function as a destination alternate aerodrome for all aircraft flying to CPT. With increasing air travel demand, especially during peak periods, a secondary reliever airport must alleviate congestion at CTIA and support future growth."

H & A Planning (2024) also considered the **Desirability (placing)** of the proposed development. CWA's location relative to significant growth areas like Paarl, Stellenbosch, and the Winelands, enables it to be close enough to be convenient, but far enough to avoid urban constraints or have an undue negative impact on large residential communities. The airport is easily accessible from major roads (N1) and is near railway, which could set it up to receive land cargo from other ports. With the completion of the northern loop of the R300, regional accessibility will be further enhanced. By distributing passenger traffic across two airports, road congestion around the airports would be reduced, making it easier for passengers to reach their flights on time instead of funnelling all passengers via the N2/R300 highways. The site is not close to a nature reserve or within any heritage or cultural landscape area. Finally, it falls outside a built-up area, the existing controlled airspace of CTIA, and the Koeberg Nuclear Protection Zone.

Lanseria International Airport, north of Johannesburg, is a comparative airport as it serves as a secondary airport for the Oliver Tambo International Airport. To provide further context, a brief overview of how the development of Lanseria airport evolved is provided below.

Case study: Lanseria International Airport

Lanseria was established in 1972 by two pilots as a backup airport to relieve traffic at OR Tambo International, which was then known as Jan Smuts International. In 1974, it was a small airport that served general aviation and private aircraft. However, it required constant investment in modifications to accommodate larger jets with more advanced technology. After being sold to a group of private investors in 1991, it underwent a major renovation and continued to grow following a sale in 2012[7].

[7] https://mybroadband.co.za/news/business/386494-south-africas-new-lanseria-mega-smart-city-plan-and-what-it-will-look-like.html

Lanseria has developed into a complete secondary airport that can serve several domestic low-cost airlines as well as regional aircraft. The airport can currently handle 3.5 million people annually and hopes to increase this to 18 to 20 million in the future[8]. The airport will need a longer runway to handle business jets and Boeing 737s to sustain this expansion. Its capacity will be increased, and more regional carriers will be drawn in by a new set of improvements announced in July 2024, which would further lessen the strain on OR Tambo. A fuel depot, new fixed-based operator facilities, taxiway renovations, and new maintenance, repair, and overhaul facilities are among the recent additions. Lanseria would further mitigate risks of fuel supply problems by the introduction of a new fuel station.

In addition to the substantial development that Lanseria has brought about in the area around the airport, the Lanseria area is slated to become one of Gauteng's first Smart Cities. It would take about 25 years to build the Lanseria Smart City near Lanseria International Airport. The airport in the development centre will be the primary economic engine propelling the city's expansion. The surrounding neighbourhoods are expected to see significant residential growth bolstered by upgrades to the current road system[9].

5.2 Project viability and sustainability

The project is a "brownfield" development of a site that includes four concrete runways built during WW2. CWA will generate revenue from aeronautical and non-aeronautical activities (Cape Winelands Airport Limited, 2021b). The aeronautical income includes, among others, Landing fees, Aircraft parking fees, Passenger fees, Terminal charges, and Aviation fuel sales. The non-aeronautical revenue includes Commercial property rental (hangars, office, facilities, warehousing, etc.), Retail Concessions, Advertising, Car parking & car rental, Air shows and events.

To become and remain financially sustainable over the long term, the CWA should generate more returns than the cost of debt used as part of the financing structure. In this manner, the ability to service debt, meet short and long-term obligations and ensure the assets are efficaciously utilised to generate sustained revenue form the basis for the micro-sustainability of the CWA. The CWA will access markets and position itself in line with its strategic pillars, as mentioned above. The ability to diversify into a market space within the COCT and the surrounding districts that is generally untapped, offers the basis for a sustained market and a derived benefit for the CITA and enhanced synergies between the two airports. It is envisaged that the COCT economy and the region would benefit from such an investment. Passengers will benefit from a shorter travel distance and experience cost savings. Research by the CWA Developers indicates the following:

- The Traffic Forecast Study (NACO, 2023) indicates that the CWA would generate sufficient passenger volumes to enhance its financial feasibility and long-term sustainability, achieving 5 million annual passengers (of which 40% will be international) by 2050. With the CWA envisaged to attract 50% of all new passengers, it demonstrates significant pent-up market demand for an international service into and from Cape Town, which can be met with the nature and scope of the proposed infrastructure. With the efficiencies that the existence of CWA will inject into the airline industry as it relates to increased route profitability, CWA also anticipates that air traffic growth could be accelerated ahead of the current air traffic projections for Cape Town (the region) which currently indicates approximately 22 million passengers per annum by the year 2050. This would effectively mean an increase in the size of the market.
- The availability of an alternate airport implies that domestic and international airlines would require less reserve fuel, resulting in weight savings, which can, in turn, be used to carry additional cargo or passengers. Airlines with direct flights into Cape Town also stand to reduce their carbon emissions by 5% per flight, creating greener skies.

[8]Africa's incredible £21bn airport and megacity that will be home to 500,000 people | World | News | Express.co.uk
[9]https://dailyinvestor.com/south-africa/75314/the-south-african-international-airport-where-everything-works/

- The initial feasibility studies prepared by CWA and the Concept of Operations (CONOPS) and simulations conducted to date suggest that the proposed CWA would integrate seamlessly into the current air transport and airspace network.
- Based on the projected volumes, public resources such as customs, immigration, and other government officials would be justified. The airport's business plan has allowed for all costs associated with these resources (including facilities) to ensure that they can be provided on a cost-recovery basis.

The **Cape Winelands Alternate Aerodrome Study** (Munich Airport International GmbH, 2024) concluded that only two South African airports currently provide a suitable destination alternate aerodrome for CPT, i.e. only Durban and OR Tambo Airport can handle all aircraft types flying to CPT. However, the high elevation of OR Tambo Airport means certain aircraft types cannot take off with their maximum take-off weight. "The CWA master plan fulfils all the requirements to function as a destination alternate aerodrome for all aircraft types flying to CPT. Considering the significant fuel saving for airlines from planning CWA as the destination alternate aerodrome for CPT, CWA could be the preferred destination alternate for CPT in the future."

An independent **Airspace and Capacity Study** (Straten CSL, 2024) concluded that "the CWA will be able to operate independently of CTIA, i.e. there will be no impact to operations from/to CTIA. The future development plans for CWA are also not expected to be an issue as the runway re-alignment will enhance airspace use and further cement the independent operations between the two airports." CWA acknowledges the need for further consultation to develop a sustainable solution for the GA community. Discussions with various GA groups are underway, and to date, three engagements have taken place. CWA supports the recommendation to form smaller working groups to address specific concerns. These groups will play a critical role in refining the airspace design requirements and ensuring that all user needs are considered. Additionally, an overall review of the Western Cape airspace is one of the solutions being investigated. CWA remains committed to collaborating with all stakeholders to achieve a balanced and effective outcome

Environmental sustainability is also an important consideration. It was estimated that aviation emissions could account for about 22% of global carbon emissions by 2050 (https://www.nature.com/articles/s44168-022-00001-w). Furthermore, aviation emissions drive about 7,2% of global warming due to high-altitude atmospheric effects. Although global emissions from aviation have tripled over the past 50 years, air travel volumes have increased 75-fold since 1960. The much slower growth in emissions implies significant improvements in aviation efficiency, linked to improvements in the design and technology of aircraft, larger aircraft sizes (more passengers per flight), and an increase in how 'full' passenger flights are (also referred to as the 'passenger load factor').

5.3 Compatibility with spatial planning from an economic perspective

The individual benefits of a project overstate the true benefits if the project diminishes benefits elsewhere in the area. Economic desirability is therefore essential in determining whether the proposed development complements economic planning as reflected in spatial development planning. It is not sufficient that the development results in some positive spin-offs if it is not compatible with planning guidance designed to maximise the overall economic potential of an area. SDFs are central to economic development planning and guide overall development in a direction local and provincial authorities see as desirable. Notwithstanding, the basic purpose of an SDF is to outline the spatial implications of Integrated Development Plans (IDPs). To provide some context, the provincial, regional and metro SDFs (together with related frameworks, interpretation reports and discussion documents) and Local Economic Development (LED) plans and strategies (together with other documents that offer guidance) are considered as a premise for this part of the assessment.

5.3.1 National Development Plan 2030 (NDP 2012)

The National Development Plan (NDP, National Planning Commission, 2012) set out six interlinked priorities (National Planning Commission, 2012):

- Uniting all South Africans around a common programme to achieve prosperity and equity;
- Promoting active citizenry to strengthen development, democracy and accountability;

- Bringing about faster economic growth, higher investment and greater labour absorption;
- Focusing on key capabilities of people and the state;
- Building a capable and developmental state; and
- Encouraging strong leadership throughout society to work together to solve problems.

While achieving the objectives of the National Development Plan requires progress on a broad front, one of the fundamental factors is raising employment through faster economic growth. A sustainable increase in employment will require a faster-growing economy and the removal of structural impediments, such as poor-quality education or spatial settlement patterns that exclude the majority. These are essential to achieve higher investment rates and competitiveness and expand production and exports. However, business, labour, communities and government must work together to achieve faster economic growth.

In summary, the NDP proposes to enhance human capital, productive capacity, and infrastructure to raise exports, increase investment resources, and reduce reliance on capital inflows. Higher investment, supported by better public infrastructure and skills, will enable the economy to grow faster and more productively. Rising employment and productivity will lead to rising incomes and living standards and less inequality. Shifting the economy towards more investment and lower consumption is thus necessary for long-term economic prosperity. In addition, more efficient and competitive infrastructure is required to facilitate economic activity conducive to growth and job creation.

The NDP identified nine main challenges facing the country and approaches to tackle them. The NDP's key objectives are eliminating income poverty and reducing inequality by 2030. In terms of Urban and Rural Transformation, the NDP's human settlement targets include more people living closer to their places of work, better quality public transport and more jobs in proximity to townships. To achieve these targets, it advocates strong measures to prevent further housing development in marginal places, increased urban densities to support public transport, incentivising economic activity in and adjacent to townships, and engaging the private sector in the Gap housing market.

5.3.2 National Spatial Development Framework (NSDF) 2050

The National Spatial Development Framework (NSDF) provides the vision and directives for a resilient, sustainable and inclusive spatial pattern through a consolidated and well-connected system of international, national and regional development nodes and corridors, within a highly productive network of rural regions, where development nodes, rural regions and hard infrastructure are embedded within the limitations and interdependencies of national ecological infrastructure and natural resources" (p. 106).

The NSDF envisions the National Transport System as "A well-functioning and well-managed national transport and connectivity infrastructure network that ensures and enables (1) the safe and efficient movement and transport of people, (2) the rapid and reliable flow of information and communication, (3) the efficient transport of goods, (4) the provision of services, and (5) the ability to participate and interact in the global economy. Given the high costs associated with the construction, upgrading and maintenance of such networks, which include airports, harbours, border posts, logistic hubs, electricity, fibre networks, broadband, natural gas pipelines, and road and rail networks, and the need to recover such costs through use, a country has to carefully plan where these networks are to be built/installed."

5.3.3 National Airport Development Plan (2015)

The Department of Transport (2015) released a National Airport Development Plan (NADP) to address the gaps between the current airport network and the future desired state. As of March 2015, there were 135 licensed airports, of which 10 are designated as international airports, and 56 are voluntarily registered airports in South Africa. The majority of runways fall within International Civil Aviation Organisation (ICAO) Codes 1 and 2 (short and narrow runways), typically unpaved (grass or gravel) runways. There are at least 39 Code 3 and 4 runways (longer and wider runways), which include OR Tambo International Airport, Cape Town International Airport, King Shaka

International Airport, Upington International Airport, Lanseria International Airport, Kruger Mpumalanga International Airport and Mafikeng Airport.

Existing infrastructure capacity should be optimised to deal with activity levels, including by:

a) prioritising alternative approaches to addressing capacity pressures rather than major infrastructure expansions or green-field investments (such as reviewing aircraft mix, improving airspace management and design, and refining infrastructure to speed up throughput);

b) proactive identification of capacity gaps; and

c) the use of Planning Activity Levels.

Where airports are expected to exceed their ultimate capacity in the next 40 to 60 years, provision should ideally be made to safeguard suitable land for the required additional airport, and the zoning around the area also needs to be aligned to avoid encroachment of incompatible land use. In line with the National Infrastructure Plan's planning horizon, any major infrastructure projects required within the next 20 years to address the capacity gap should be identified and reviewed every 5 years.

The guidance for individual airport planning includes good practice for forecasting demand, optimising socio-economic impact, facility design, minimising environmental impacts and integrating requirements from financiers. Balancing these considerations into airport planning and design is complex and requires significant planning capacity. DOT recommends an increased focus on user-experience design and user co-design methodologies. DOT also recommends development of shared technical capacity, knowledge systems and guidelines to support individual small airport planning, as well as finding ways to tap into private sector expertise.

The NADP proposed the following initiatives as part of a five-year (2015-2020) implementation plan to help give effect to the guiding principles:

1. Integration of airport network planning into transport and spatial planning coordination structures
2. Formalisation of selection processes for international, "regional-international" and national airports, and pre-approval process for green-field airports
3. Mechanism to reserve land for key long-term airport requirements
4. Development of a preferred option to provide for non-scheduled air services, general air services, flying training, adventure aviation and non-commercial aviation within the national airport network
5. Development of a knowledge management system and DOT capacity to inform airport network planning
6. Development of airport planning technical capacity at a national and provincial government level that can support individual airport planning
7. Development of a detailed guide to support airport development and planning within their surroundings
8. Exploration of potential mechanisms to involve the private sector in airport planning and design
9. Joint identification with relevant entities of the most viable approach to securing funding to support airside safety and security compliance for airports
10. Collaboration to create networking and information sharing platforms for airport designers and planners

5.3.4 Western Cape Provincial Spatial Development Framework (WCPSDF) 2014

The Western Cape Provincial Spatial Development Framework (2014) refers to the importance of a coherent framework for the Province's urban and rural areas that gives spatial expression to the National and Provincial development agendas, among others. Its guiding principles include the following:

- **Spatial justice**: Past spatial and other development imbalances should be redressed through improved land access to and use by disadvantaged communities.
- **Sustainability and resilience**: Land development should be spatially compact, resource-frugal, compatible

with cultural and scenic landscapes, and should not involve the conversion of high-potential agricultural land or compromise ecosystems.

- **Spatial efficiency**: Efficiency relates to the form of settlements and use of resources - compaction as opposed to sprawl; mixed-use, as opposed to mono-functional land, uses; residential areas close to work opportunities as opposed to dormitory settlement, and prioritisation of public transport over private car use.

In terms hereof, the logical underpinning of the spatial strategy of the WCPSDF covers the following (p. 34):

- Capitalise and build on the Western Cape's comparative strengths (e.g. gateway status, knowledge economy, lifestyle offering) and leverage the sustainable use of its unique spatial assets;
- Consolidate existing and emerging regional economic nodes as they offer the best prospects to generate jobs and stimulate innovation;
- Connect urban and rural markets and consumers, fragmented settlements and critical biodiversity areas (i.e. freight logistics, public transport, broadband, priority climate change ecological corridors, etc.); and
- Cluster economic infrastructure and facilities along public transport routes (to maximise the coverage of these public investments) and respond to unique regional identities within the Western Cape.

The Province's economic prospects clearly lie in the urban space economy (i.e. the metropolitan area), with public infrastructure investment forecasted to be the leading growth driver. Several of the key concepts related to the space-economy policies refer to the following (as adapted) (p. 76):

- Reinforce the Cape Metro region as the Province's economic engine;
- Use new bulk economic infrastructure investment in the Cape Metro functional region to leverage private sector and community investments (i.e. energy, water, transport and freight logistics, ICT);
- Build 'land assembly' capacity in the urban space-economies and apply new land policy instruments (e.g. land banking, land value capture, etc.);
- Incentivise mixed land use and economic diversification in urban land markets;
- Regenerate and revitalise existing economic nodes in the urban space-economy (i.e. CBDs, etc.);
- Prioritise public transport investment and higher-order facilities in district centres; and
- Prioritise rollout of the 'greener' economy.

5.3.5 City of Cape Town Inclusive Economic Growth Strategy (2021)

The City of Cape Town Inclusive Economic Growth Strategy (IEGS) (City of Cape Town, 2021) recognises that "inclusive economic growth can contribute to the alleviation of existing poverty and inequality as well as the improvement of livelihoods for current and future generations of Capetonians." The average economic growth rate in the five years preceding 2019 was 1,5%, down from 2,6% in the five years preceding 2013. The Cape Town economy was significantly impacted by two global trends, i.e. climate change linked to extreme weather events and technological change that creates both threats and opportunities in the job market.

While this Strategy is intended to guide City operations and decision-making for 5 years, the context is firmly embedded around economic recovery after COVID-19. Implementation of this Strategy is thus a three-phase recovery approach that prioritises service provision, business support, labour market support and investment stimulation:

Phase 1: Stabilisation – A 12-month programme of initiatives which will be emphasised due to their ability to respond to and halt the immediate economic downturn.

Phase 2: Adaption – A further 12-month phase will emphasise a programme of initiatives that can transition us to a re-purposed and relevant economy with increased competitiveness in the post-Covid economic landscape.

Phase 3: Rebuilding/Recovery – A long-term programme of initiatives that consolidate and build on the previous phases and seek to leverage competitive advantages for sustainable growth within the changed economic context

Specific references to airports and air transport include the following:

- There has been added focus on air travel, with over 750 000 inbound seats added to the Cape Town International Airport network through the City's partnership with the Cape Town Air Access Programme. The added demand drives airport expansion as a transport hub and a larger, more sophisticated business precinct (p. 18).
- The economic impact of congestion is also felt in relation to the transport of freight, perishable goods or other "time-sensitive" products by road-based freight vehicles. The current crisis manifests particularly on the road network for commuters, as Cape Town's otherwise comprehensive rail network is increasingly unsafe, unreliable and subject to sabotage: more than 40 train carriages have been burnt in arson attacks between 2017 and 2019 (p. 30).
- Expand and implement the City's SEZ offering to allow targeted areas identified for strategic growth to foster improved prospects for inclusive economic growth, including around key strategic assets such as the airport (p. 44).
- The Cape Town International Airport (CTIA), with over 10 million in passenger traffic per annum, is the second busiest airport in South Africa, winning the Best Airport in Africa by Skytrax in 2020 and retaining its rating as the 23rd best airport in the world (Skytrax, 2020). CTIA was also named Africa's Leading Airport by World Airport Awards (World Airport Awards, 2020) (p. 67).
- The City will pursue several activities to identify new transport solutions, including supporting ACSA in the development process to realign the CTIA runway to allow for increased traffic and larger planes.

5.3.6 City of Cape Town Integrated Development Plan (2022-2027)

The IDP for the City of Cape Town (2023a) confirms the vision to be "a City of Hope for all – a prosperous, inclusive and healthy city where people can see their hopes of a better future for themselves, their children and their community become a reality". To achieve this vision, several focus areas are outlined in the IDP, with the following that specifically relate to economic growth and transport:

ECONOMIC GROWTH: The guiding priority for everything the City does is to support faster economic growth that enables people to lift themselves out of poverty. Economic growth is needed to rekindle our hope for a more prosperous future.

TRANSPORT: Efficient and sustainable public transport and quality road networks are key enablers to businesses, workers and job seekers. A city that is better connected will be more productive and create more economic opportunities. The City will work to make it safer and cheaper for all people to travel, increasing their freedom to enjoy all that the city has to offer. The city must be built on the right foundations to succeed in becoming a City of Hope and be a prosperous, sustainable, and inclusive city in the long term.

5.3.7 City of Cape Town Municipal Spatial Development Framework (2023)

Fundamental to the City's Municipal Spatial Development Framework (MSDF) is to ensure spatial transformation via dense and transit-oriented growth and development anchored by an efficient transport system. The 2018 MSDF emphasised a progressive spatial transformation agenda and an inward growth focus for "an inclusive, integrated and vibrant Cape Town that substantially countered the inter-generational legacies of apartheid and provided the foundation for sustainable, inclusive spatial and economic growth" (City of Cape Town, 2018). The 2022-2027 IDP

sets out the vision to create a City of Hope – "a demonstration of what is possible in South Africa if we work together – and living proof that South African cities can be places where people's life steadily improve, and poverty is overcome". This implies a commitment to address spatial injustice, inequality and avoids creating new structural imbalances; working in partnership with the private and public sector in achieving spatial transformation by building a more inclusive, integrated, vibrant and healthy city; and proactively responds to social, economic, climate and resource shocks and stresses.

The inward growth focus of the 2022-2027 MSDF (City of Cape Town, 2023b) directly supports the City's resilience and sustainability efforts, and is a response to built environment stresses, such as urban sprawl. These stresses typically place the greatest burden on the poorest members of Cape Town society who commute the longest distances between home and work locations, pay the greatest percentage of household income towards fares, and spend the most time getting to and from places of work.

The 2022-2027 MSDF identified three main spatial strategies:

- **Spatial strategy 1**: Plan for economic growth and improve access to economic opportunities;
- **Spatial strategy 2**: Manage urban growth, and create a balance between urban development, food security and environmental protection; and
- **Spatial strategy 3**: Building an inclusive, integrated, vibrant and healthy city.

Specific reference is made to the Cape Town International Airport (p. 41), "one of Cape Town's primary freight and logistical links to global commercial markets. Retention and expansion of airport infrastructure and intensification of associated land uses support the regional economy and job creation. Its continued role in aviation and related land uses surrounding the airport should be encouraged and actively supported. Migration of general aviation activity from CTIA to Cape Winelands Airfield should be supported to promote better operational efficiencies for aviation. Other Civil Aviation Authority accredited landing strips, flying schools, as well as farms and other recreational landing areas, will continue to play a smaller role, even in the regional context."

The following policies specifically refer to the CWA and CTIA:

- **Policy 5.1:** Land use decision-making should consider leveraging large-scale economic investments in airport precincts and supporting transport infrastructure with employment-generating land uses.
- **Policy 5.2:** Support land use intensification at CTIA and the CWA to enhance Cape Town's aviation-enabled competitive advantage. Maintain a network of airfields, such as Morningstar, for civil aviation purposes.
- **Policy 5.3:** Decision-making on land development proposals in areas subject to cross-municipal-boundary urban development pressure to ensure relevant consideration to longer-term implications of urban growth (i.e. increased peripheral land demand for urban development and bulk infrastructure investment).
- **Policy 5.4:** Decision-making on land development proposals to consider operational and economic cost benefits to the city as a service provider, the affordability of services to future occupants and practicalities of regional service provision (like disaster risk management, firefighting, ambulance and emergency services). This implies the consideration of the impact of potential development on the coherency and consolidated nature of spatial assets that underpin the regional economy (i.e. areas of agricultural significance; terrestrial and coastal natural resources; cultural and scenic landscapes; surface and groundwater sources; minerals and construction materials; and air quality).
- **Policy 5.5**: Support and prioritise the reconfiguration of inter- and intra-regional freight and logistics networks to reduce externalities[10] and the costs of doing business. Support the regional development potential of CTIA and Cape Town.

[10] Externalities in this context refer to negative economic consequences (e.g. violent crimes, burglaries and vehicle theft) associated with a development.

H & A Planning (2024) indicated that "Policy 16 deals with directing urban growth away from risk areas and activities. This would include current and proposed noise contours for development proposals and must be part of the EIA processes. Consultations are mandatory for all urban development proposals between 55 dBA – 80 dBA noise contours (current and proposed). Runways must be within the framework of restrictions in terms of SANS 10103: 2008 as well as any applicable height restrictions. The future duelling of the Cape Town International Airport (CTIA) single re-aligned runway must balance economic benefits with noise impact on existing and potential informal or formal residential development, as well as on a range of social infrastructure like clinics, schools, elder care facilities and halls. It would be reasonable to assume that similar considerations would apply to the Cape Winelands Airport. Likewise, Policy 16 also spells out that other incompatible land developments will not be supported if closely located to an airport or airfield with any existing or potential future aviation rights. The implementation intent of Policy 16 is to support the CTIA in continuing to provide the national and international aviation function to a limit determined by its manageable impact on surrounding land uses (noise impacts). Linked to this policy statement is the support of complementary and appropriate land development at the Cape Winelands Airport that will contribute to the efficiency of CTIA in terms of general aviation and related uses.

5.3.8 Northern District Plan (2023)

A District Plan is a framework of policies and plans that will guide the physical development of a district (in the same way that the City's SDF will guide the development of the City). The District Plan (City of Cape Town, 2023c), along with the City's SDF and local plans, are used by the City to apply spatial concepts and structuring elements to the District. The CWA falls within Sub-district 3 (Lucullus Road/Maroela Road Corridor) and covers the areas east of the Malmesbury rail line, south of the R312 and south of the N1 freeway. What is of particular importance, is that the areas to the west and south of the CWA have been earmarked for residential development, i.e. Bella Riva and Garden Cities (numbers 5 and 6 in **Figure 16**).

Key interventions / actions are proposed in the Northern District Plan to facilitate the achievement of the spatial objectives through the spatial vision, the role of the district and the spatial concept. The following specifically relate to the Fisantekraal area (p. 28):

1. Protect Mikpunt, Philadelphia and Klipheuwel from expansion.
7. Link Fisantekraal to the south with urban footprint via mixed-use development (employment-generating focus), dependant on bulk services and adequate accessibility. However, it should also protect the Joostenbergvlakte smallholdings/residential estates from changes in land use for the duration of the district plan.
10. Protect agricultural land from urban expansion.
11. Amend the urban development edge to include Cape Winelands Airport and round off the edge to the north of the R312 (Lichtenburg Road).

The CWA is specifically supported and encouraged in the district-wide Development Guidelines (p. 60) under Airports and other freight hubs:

1. Encourage and support the development of the airport to address market needs in the area.
2. Encourage the development of inter-dependent associated economic activities, maximising economic opportunity within and in immediate proximity to the airport property, as appropriate.

H & A Planning (2024) noted that the existing airport site with its Transportation Zone (TR1) zoning and consent for an airport is located within the CoCT's urban edge. However, the proposed extension spans two MSDF Spatial Transformation Areas, namely the Incremental Growth Area (inside the Urban Development Edge [UDE]) and the Discouraged Growth Area (outside the UDE). The landside development is west of the runway, mainly within the Incremental Growth Area, while the airside (runway safety area) is mostly outside the UDE.

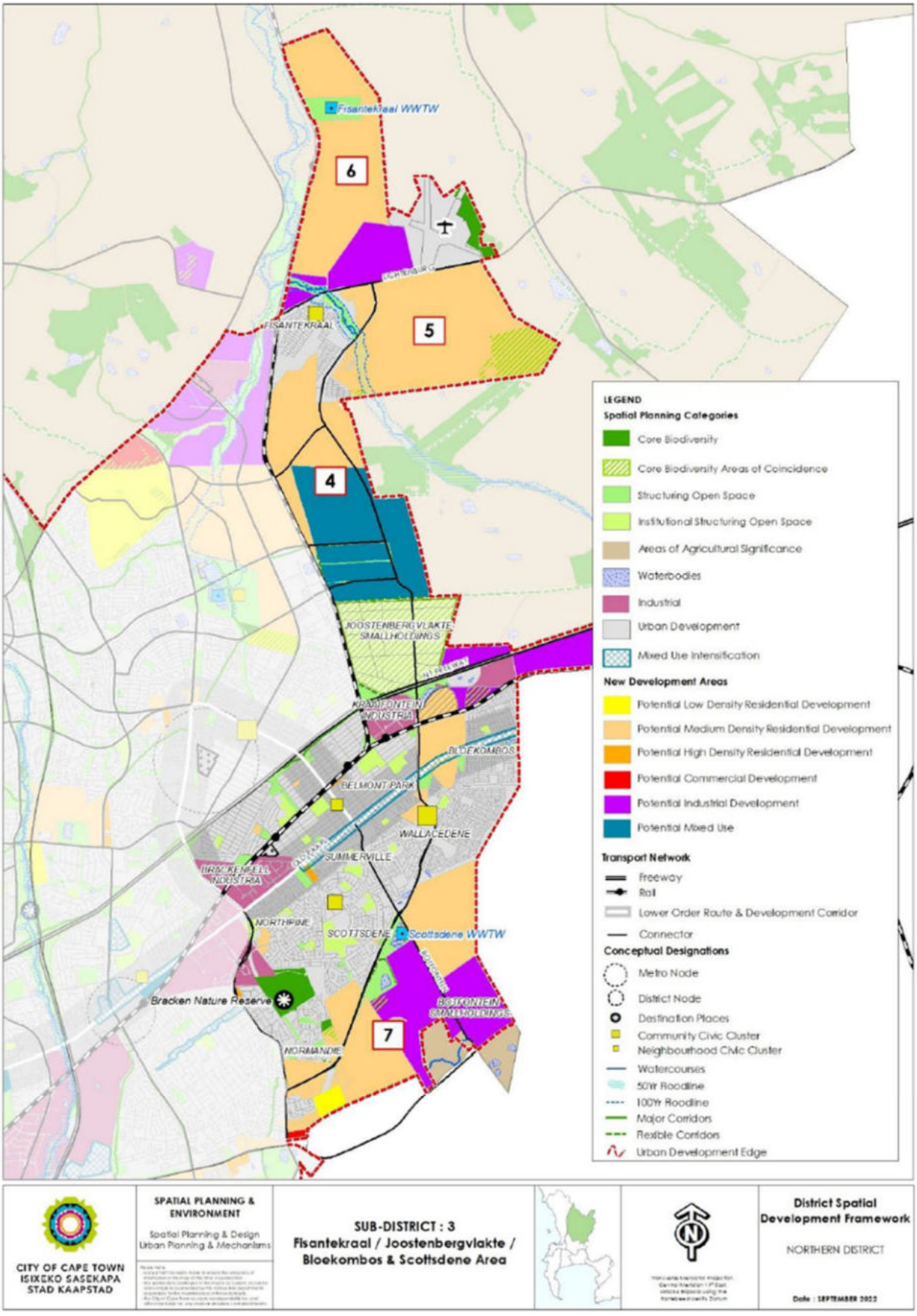


Figure 16: Northern District Plan for Sub-district 3.
Source: Northern District Plan Vol 2, City of Cape Town, 2023c

The Sub-district 3 Development Guidelines (p. 92) identified new development areas. The following were stated for the Cape Winelands Airport (PA 474-4 & PA 724-10) and Farm portions to the west (PA 724-9 & CA 175-2):

1. "The airfield, located directly north of the R312, operates under private ownership. Any extension to the existing operations, or application for amendment of approvals (existing) need to follow due process, as may be prescribed. With regard to the portions identified on the Biodiversity Map and SDF Plan areas of high biodiversity value, detailed ground-truthing needs to establish the extent and conservation value of those portions.
2. To round off the urban development edge in the area to the north of the R312, CA 175/2 & 724/9 are included inside the urban development edge, and may be considered for industrial development, together with CA 175/1, to increase employment for the Fisantekraal community. Access onto the R312 needs to be resolved by applicants prior to development of proposals, which should include pedestrian movement across the R312.
3. Note that for any development proposals located within the noise contour zones around the airfield, the relevant authority should be consulted with regards to the applicable noise regulations and the type of development (i.e. residential or non-residential) that could be permitted to ensure that appropriate mitigation measures are put in place, where necessary. The AOLS (Airport Obstacle Limitation Services) limit building heights of developments located in proximity to the airport flight paths. These developments are subject to comment from the South African Civil Aviation Authority."

5.4 Conclusions

The CWA is a large private investment that would contribute to economic growth and job creation in the COCT and, particularly, the Northen District during the construction and operational phases. The proposed CWA development focuses on transport and commercial uses related to aviation that will contribute to employment and new business opportunities for the COCT. The project's roll-out offers skills development opportunities in the aviation space and will contribute directly and indirectly to the aviation landscape and infrastructure. The City of Cape Town's IDP and SDF support the CWA development, and the Northern District Plan includes a large part of the property extent earmarked for the CWA within the urban development edge. H & A Planning (2024) concluded that the proposed CWA development "directly supports the vision and development concept of the **Greater Cape Metro Regional Spatial Implementation Framework (GCM RSIF) 2019 Policies,** by enhancing regional transport infrastructure and logistics networks, lowering the costs of doing business and improving the efficiency of logistics operations in the region. It will drive economic growth by attracting investment, improving air access, supporting exports, and positioning the region as an innovation hub. The expansion will also spatially provide easier access to economic opportunities, ultimately creating a more inclusive and dynamic economy for the GCM as contemplated in the **Western Cape Growth for Jobs Strategy 2023 and Priority Focus Areas (PFA)**."

The CWA development subscribes to the NDP principles by offering commercial opportunities close to the Northern District of the City of Cape Town. The proposed Cape Winelands Airport development will contribute toward private sector investment, reinforce the Cape Metro economy and create additional employment (particularly in the transport and construction sectors) that will further strengthen growth in the local economy. The project addresses spatial efficiency to some extent, i.e. mixed-use as opposed to mono-functional land uses. The provision of additional airport services will contribute to the tourism sector in the Western Cape as it will increase connectivity and visitors to the region.

The development will ensure a substantial direct investment in the City of Cape Town and represent a significant indirect investment. During the construction and operational phases, direct jobs will be created to benefit the surrounding areas' communities. It will also directly support the transport sector by providing additional airport services. It will contribute to creating and attracting investment that will facilitate economic growth and employment opportunities while also addressing the need for improved aviation services in the City.

6 ASSESSMENT OF IMPACTS

6.1 Introduction

Various qualitative and quantitative impacts are attributed to a proposed development, applicable to either the construction or operational phases, or both. The following potential impacts were identified for the proposed CWA expansion:

Potential positive socio-economic impacts:

- Provision of transport infrastructure (operations)
- Creating new employment opportunities (construction and operations)
- Economic income (construction and operations)
- Creating new business opportunities (operations)
- Revenue accruing to local authorities (operations)

Potential negative socio-economic impacts:

- Vehicular traffic flows (construction and operations)
- Nuisance factors, such as dust and noise (construction)
- Influx of job seekers (construction)
- Construction workers in local communities (construction)
- Local crime (construction and operations)
- Risk of informal settlements (operations)
- Sense of place (operations)
- Nearby farming and business operations (operations)
- Surrounding land values (operations)
- Bulk infrastructure requirements (operations)

Per NEMA EIA Regulations (2014, as amended), the potential impacts of three development Alternatives are assessed relative to the No-Go Alternative using the impact assessment criteria indicated in **Annexure A**:

1) **No-Go Alternative 1** – development of the current airport within its current rights, i.e. four runways up to 1 454 m and 6 000 m^2 GLA (which is insufficient to support the approved 301 Air Traffic Movements)
2) **Runway Alternative 2** - a commercial and aviation hub (350 000 m^2 GLA) with a 3 500 m main runway at orientation 01-19 and initial retention of cross runway 14-32 in Phase 1
3) **Runway Alternative 3** - a commercial and aviation hub (350 000 m^2 GLA) with a 3 500 m main runway at orientation 01-19 (no cross runway)
4) **Preferred Alternative 4** – same footprint as Alternative 3, with minor changes (the fuel line was extended into the GA precinct; the internal precinct boundaries were corrected; three boreholes are indicated; the incoming potable line has been added)

A summary of the assessment outcomes is provided in **Annexure B**. **Cumulative impacts** refer to any other developments and existing activities within the immediate area that could compound any positive or negative impacts of the proposed development. This usually refers to similar developments in the immediate area, such as Cape Town International Airport. Furthermore, several residential developments in the Fisantekraal area, such as Groot Phesantekraal, Greenville Garden City and Buh-Rein Estate, are in the planning or construction stages, and could contribute to a cumulative impact (refer to **Section 2.6**).

Where applicable, appropriate **mitigation measures** are proposed to reduce the significance of the specific impacts. **Residual impacts** refer to the significance after the implementation of mitigation measures.

6.2 Construction Phase

The negative qualitative impacts during construction mostly relate to large construction vehicles on access roads, noise and dust, an influx of job seekers, crime, and 'incoming' construction workers that may impact local communities. Potential positive impacts include temporary employment opportunities and contributing to the local economy, specifically the construction, retail, and services sectors and industries. Note that the impacts are based on an initial construction period of 4 years for Phase 1, although there would be additional construction in Phase 2 (no clear timeframes yet).

6.2.1 Vehicular traffic due to construction activities

Nature of impact

The movement of large construction vehicles would affect traffic flows and residents along the access routes.

Scope and consequence of impact

Large construction vehicles would impact the road infrastructure and traffic flows along the access routes during construction. The site would be accessed via the R312 and either the R302 (Klipheuwel Road) from Durbanville or the R304 via the N1. The Transport Impact Assessment (Innovative Transport Solutions, 2025) determined that most relevant intersections operate at an acceptable Level of Service (LOS) during peak hours. However, the Klipheuwel Road/Lichtenburg Road, Lichtenburg Road/Boys Biers Drive, and Klipheuwel Road/Arum Lily Street intersections experience significant delays (LOS F) during peak periods.

The Transport Impact Assessment indicated that approximately 875 000 m³ of earthworks would be required for construction (worst-case scenario) if all earthworks are sourced from existing quarries mostly located west of the site. With a truck capacity of 15 m³, this equates to approximately 58 167 truckloads. However, most earthworks would be done on-site to balance cut and fill areas. Due to the poor condition of the gravel roads and the expected heavy loads, trucks should use the existing surfaced road network to access the quarries.

Source: Innovative Transport Solutions, 2025

Upgrades are recommended for Klipheuwel Road/Lichtenburg Road, including the installation of a traffic signal and additional turn lanes, which are expected to improve the LOS to B. Planned future developments and access management plans (AMPs) for Lichtenburg Road (MR213) and Klipheuwel Road (MR188) include changes to intersection configurations and realignments to reduce demand at some constrained intersections. However, these upgrades are recommended as part of the Background Traffic Conditions scenario, i.e., background developments (such as Bella Riva) would mitigate these intersections.

According to information from the Bella Riva transport consultants (Sturgeon Consulting in Innovative Transport Solutions, 2025), a 5-year horizon is considered for Phase 1, and a 10 to 15-year horizon for Phases 2 and 3. Conditions directly related to the proposed CWA expansion include:

- Minor Roads 6/8 and 59 in the east-west direction would be closed. The East-West link road would be constructed from Klipheuwel Road up to the first access point for Bella Riva Phase 1 (5-year horizon).

- Minor Road 6/8 (north-south), also known as Mellish Road, would be used as access from Lichtenburg Road (R312) until signalisation is warranted/required. This would require the proposed Lucullus Road northern extension, which would only be constructed as part of Bella Riva Phase 2 and 3 (10 to 15-year horizon).

Development Alternatives
Alternatives 2, 3 and 4 would require more construction activities (and thus more vehicles) for the extended runway and landside development than the No-Go Alternative. Runway Alternative 2 would retain the cross runway in Phase 1, requiring minor additional construction activity.

Cumulative Impact
Ongoing and approved developments in the area would increase the number of construction vehicles along the access routes. This is particularly relevant to Bella Riva and Greenville Garden City, which use the same access roads as CWA.

Mitigation measures
The Transport Impact Assessment recommended intersection upgrades in the Background Traffic Conditions scenario. Once a contractor has been appointed, a detailed construction management plan must be developed for the CWA, ensuring that deliveries are scheduled outside peak hours to prevent congestion during peak periods. Alignment with other construction projects in the Fisantekraal area is required to ensure that traffic flows are not compromised but managed to mitigate any possible risks and avoid traffic issues related to congestion caused by construction activity.

Impact Rating
The Transport Impact Assessment concluded that the impact would be **low negative** compared to other future developments in the area, which could contribute to a **medium negative cumulative impact**.

6.2.2 Nuisance factors (dust and noise)

Nature of impact
Construction activities would create dust and noise at the development site that could affect nearby receptors.

Scope and consequence of impact
During the introduction of bulk services and the construction of top structures, large earth-moving equipment and concrete mixers would generate noise and dust. Although this would be limited to the construction site, the prevailing winds would carry dust and noise towards the surrounding properties and thus affect the residents, their living conditions, and the ecological environment. The receptors likely to be affected are the residents of Fisantekraal to the southwest and various landowners/users around the site. Given the size of the development and the phased approach, it is likely that dust (and noise, to a lesser extent) would be a nuisance to surrounding landowners beyond the initial 4-year construction. The **Noise Impact Assessment** (DDA Environmental Engineers, 2024b) concluded that the noise levels during construction at the closest community receptors are not expected to exceed the SANS guidelines for urban residential areas.

The **Agricultural Agro-Ecosystem Assessment** (Agri Informatics, 2024) highlighted that some parts of the proposed development envelope intersect with very sandy soils at the surface layer. If not effectively controlled, this could result in wind erosion (and dust) during construction.

According to the **Air Quality Impact Assessment** (DDA Environmental Engineers, 2024a), dust from land clearing, site preparations, levelling, bulk earthworks (such as cut and fill operations east of the existing runways), material loading and hauling, traveling on unpaved roads, and wind erosion from exposed areas would be the main sources of air pollutants during construction. It is anticipated that the dust would fall to the ground close to the sources, which may annoy receptors in the immediate area. Visual soiling of clean surfaces, such as cars, windowsills, and household laundry, is one of the consequences of dust. The dust in the air may impair nearby visibility, which could impact any aircraft operations during construction. Since the closest settlement (Fisantekraal) is more than 1 000 meters away and no existing residential zones border the CWA site, the sensitivity in the immediate area is regarded as minimal. It is anticipated that the exhaust emissions from the equipment and truck movements at the site would

slightly raise the concentrations of air pollutants, mostly within the site and with insignificant increases in the neighbourhoods surrounding the airport. As a result, the anticipated effects of equipment and vehicle exhaust emissions during construction are regarded as negligible.

Development Alternatives

Alternatives 2, 3 and 4 would require more construction activities (thus creating more dust and noise) than the No-Go Alternative 1. Runway Alternative 2 would require additional demolition works, but should have a similar impact to Alternatives 3 and 4.

Cumulative Impact

Additional construction activities in the immediate area (such as Bella Riva and Greenville Garden City) would compound the nuisance factors if they coincide or overlap with construction at the CWA site. The CTIA is too far away to contribute to a cumulative impact related to nuisance factors.

Mitigation measures

Dust and noise emissions during the construction period should be minimised by implementing a Construction Environmental Management Plan (CEMP) for the development that would include measures and trigger mechanisms to mitigate any potential impacts to nearby receptors. An approved implementation programme and alignment with other development projects in the Fisantekraal area are required to ensure the greater community is not negatively impacted during the construction phases of the proposed CWA expansion.

The **Agricultural Agro-Ecosystem Assessment** indicated that soil erosion by wind during construction should be mitigated by minimising bare soil surfaces without adequate protection, either by applying a mulch cover or wetting the surface or similar action. Suitable run-off and soil erosion control measures and infrastructure should be designed and implemented to limit and restrict the loss or degradation of soil.

The **Air Quality Impact Assessment** also recommended dust suppression measures to reduce any possible impacts, i.e.:

- Apply wet suppression on the main site roads.
- Implement a speed limit of 30 km/hour on unpaved roads on site.
- Give preference to routes away from the western site boundary.
- Reduce the frequency of disturbance of stockpiles.

Dust monitoring along the western, southern and northern boundaries of the site is recommended to be conducted monthly during construction and to be reported quarterly to the authorities.

The **Noise Impact Assessment** indicated that no specific noise mitigation measures are necessary during construction other than ensuring that the equipment is in good working order and properly maintained and providing personnel with training to adhere to operational procedures that reduce the occurrence and magnitude of individual noisy events. General measures should include limiting night-time construction activities and avoiding night-time construction activities (earthworks) on the property west of the airport boundary, which is closer to the Fisantekraal residential area.

Impact Rating

The **Noise Impact Assessment** concluded that the significance of the unmitigated impact is anticipated to be very low. For a short duration, when the working face is closest to the Fisantekraal community towards the site's western boundary, this impact may be low. With mitigation measures, the noise impact during construction is anticipated to be insignificant. The **Air Quality Impact Assessment** concluded that the expected impact of the vehicle and equipment exhaust emissions is insignificant. The total dust deposition beyond a 200 m zone from the site is expected to be well below the DEA guideline of 600 mg/m^2/day for residential areas, resulting in an insignificant impact after mitigation. Based on these reports, the residual impact related to nuisance factors during construction would be **very low negative** for Alternative 1, and **low negative** for Alternatives 2, 3 and 4. Nearby developments could contribute to a **medium negative cumulative impact**.

6.2.3 Influx of job seekers

Nature of impact
An influx of job seekers would lead to competition with local residents for employment opportunities.

Scope and consequence of impact
As discussed in **Section 7.2.6**, Preferred Alternative 4 would require about 6 582 workers with low, medium or highly specialised skills during construction and ongoing capital expenditure requirements over 20 years. Local people skilled in earth-moving and construction activities can be employed during the construction phase, with additional opportunities associated with security, transport and related services. The Fisantekraal community struggles with high unemployment, with several low-income communities relatively close to the CWA site. The socio-demographic analysis (**Section 4**) indicates that 42,67% of the working-age population residing within 10 km of the site were unemployed in 2011. Most job seekers would likely originate from the Fisantekraal, Klipheuwel and Kraaifontein areas.

Several I&APs raised concerns about temporary construction workers who could find themselves without work after the construction phase (PHS Consulting, 2024a). While the influx of people seeking employment does not have a social impact, such a movement can result in social impacts, such as the disruption of local community networks and the cohesive social fabric within communities, increased crime levels and insufficient social services. Construction work on the proposed project is limited to a specified period, and non-local construction labourers may find themselves stranded in the area after the construction phase, resulting in more competition for employment and a higher demand for housing and social services over the long term.

Development Alternatives
Alternatives 2, 3 and 4 would require more construction activities (and thus more employees) than the No-Go Alternative 1. Runway Alternative 2 would retain the cross runway in Phase 1, but is unlikely to increase the influx of job seekers.

Cumulative Impact
Given the high unemployment levels in the surrounding communities, construction projects in the Fisantekraal area would attract job seekers. Multiple construction projects would add to the demand for casual labourers and attract more workers to the area.

Mitigation measures
Given the nature and scope of the development, contractors with an established workforce would be appointed to the project. Contractors must commit to employing people from the Northern District (specifically Fisantekraal and Klipheuwel) as far as possible. Combined with very strict security rules, this would discourage casual labourers looking for employment. However, if sufficient local labour with the required expertise is not locally available, contractors would have to hire workers from further afield, which could result in a higher influx of job seekers. A Social Engagement Plan, formal monitoring systems and contingency plans for larger-than-expected migration should be implemented and continuously assessed during construction.

Impact Rating
The residual impact would be **low negative** for Alternative 1, and **medium negative** for Alternatives 2, 3 and 4. Nearby developments could contribute to a **high negative cumulative** impact.

6.2.4 Impact of construction workers on local communities

Nature of impact
Incoming construction workers can disrupt family structures and social networks in local communities.

Scope and consequence of impact
Contractors working on large development projects usually have permanently employed construction workers who move from site to site. Depending on the location, these workers may be away from their families for extended periods and visit the local community for leisure and social activities. This could lead to an increase in alcohol and

drug abuse or sexual interactions that could lead to an increase in prostitution, unwanted pregnancies and sexually transmitted diseases (STDs), including HIV. All these may impact local families and their social structures, but can also damage the construction workers' family structure at home.

Development Alternatives
Alternatives 2, 3 and 4 would require more construction workers than the No-Go Alternative 1. Runway Alternative 2 would initially retain the cross runway in Phase 1, but its demolition would require extra workers and/or time.

Cumulative Impact
If the construction phase of the CWA expansion overlaps with other developments, such as Greenville Garden City and Bella Riva, many construction workers may interact with the local communities for an extended period.

Mitigation measures
Local labour and enterprises, defined as residents and businesses in the Northern District (specifically Fisantekraal, Mikpunt and Klipheuwel), should be employed whenever possible. An approved implementation programme and alignment with other development projects in the Fisantekraal area are required to ensure the greater community is not negatively impacted. Construction workers from outside the area should return home over weekends to maintain strong family and social bonds. If required to stay near the construction site, there should be rules for social conduct, and an STD awareness or protection programme should be implemented.

Impact Rating
The residual impact would be **very low negative** for Alternative 1, and **low negative** for Alternatives 2, 3 and 4. Nearby developments could contribute to a **medium negative cumulative** impact.

6.2.5 Increase in local crime

Nature of impact
The presence of construction activities and workers may increase criminal activities in the surrounding area.

Scope and consequence of impact
There is a general perception that local crime increases in areas near construction activities. This may include on-site petty theft, theft of building material, on-selling of security information, or burglary and theft at nearby properties. The presence of construction workers and vehicles generally increases the risk of criminals entering the construction site undetected or increases criminal activities in the surrounding area. Although I&APs mainly raised concerns about increased crime during operations (PHS Consulting, 2024a), criminals would also seek out new construction sites on their doorstep.

Fisantekraal is the closest urban settlement to the proposed development site. It lies within the adjacent Kraaifontein police precinct – a relatively high-crime precinct. According to the SAPS Crime Statistics (SAPS, 2024), contact crimes against other persons (murder, sexual offences, attempted murder, common assault, common robbery and robbery with aggravated circumstances) dominated in the Kraaifontein area in October - December 2024, accounting for 53% of all community-reported cases (**Figure 17**). There was also a high incidence of drug-related crime (546 cases) and various types of burglary and theft (a total of 619 cases).

Development Alternatives
Alternatives 2, 3 and 4 would entail more construction activities than the No-Go Alternative 1, potentially attracting more criminals.

Cumulative Impact
Given the high unemployment rate in the Fisantekraal area, construction activities would likely attract criminals searching for easy targets. Each additional development project would contribute to the risk of criminal activities, but effective security measures should confine these problems to site-specific events with less cumulative impact.

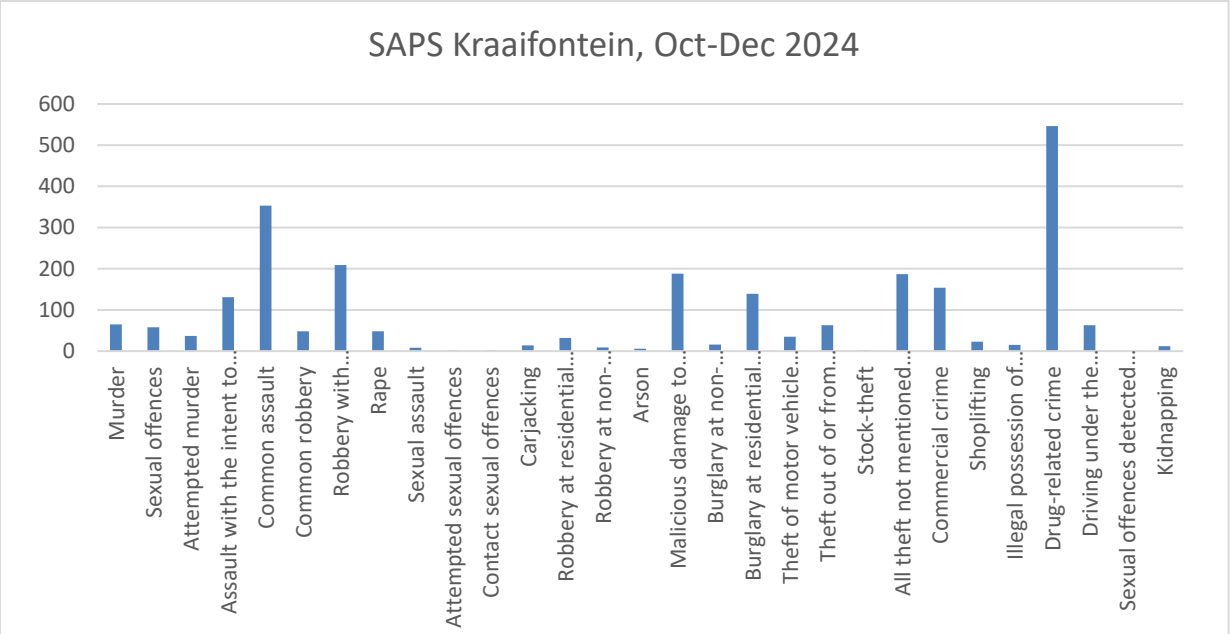


Figure 17: Crime statistics recorded at SAPS Kraaifontein, October-December 2024.
Source: SAPS, 2024

Mitigation measures

Co-operation between the Developer and contractors is essential to ensure that the area around the proposed development remains secured during construction. On-site security measures, such as perimeter fencing, controlled access, security guards and patrols, would minimise the risk. An approved implementation programme and alignment with other development projects in the Fisantekraal area are required to ensure the greater community is not negatively impacted.

Impact Rating

The residual impact on local crime would be **very low negative** for Alternative 1, and **low negative** for Alternatives 2, 3 and 4. Nearby developments could contribute to a **medium negative cumulative** impact.

6.2.6 Economic income and employment during construction

Nature of impact

The COCT and Western Cape economies would benefit from the procurement of goods and services and the spending of wages and salaries, as well as temporary employment for people with different types and levels of skill.

Scope and consequence of impact

A high-level estimate of the socio-economic impacts during construction requires an analysis based on a Social Accounting Matrix (SAM) applicable to the Western Cape. The SAM could also apply to the COCT, which is responsible for more than 70% of the Gross Value Added in the Western Cape. I&APs commented that the local communities and businesses often don't benefit directly from developments (PHS Consulting, 2024a). Local residents also emphasised the importance of sourcing labour for the project from Fisantekraal and Klipfontein to maximise the benefit to local residents (PHS Consulting, 2024c). Based on this narrative, it is possible to estimate the impact of the expenditure on the COCT economy during the construction phase. This impact is represented by an income and output multiplier, an indication of temporary job opportunities, and the impact on household incomes of those workers directly or indirectly involved in the construction phase. The impacts are direct, indirect and induced, with the latter representing spending of salaries and wages in the local economy.

The initial construction is envisaged to take 4 years (Phase 1), with most of the capital expenditure occurring in the first two years (Year -1 and Year 0). Phase 2 would entail further upgrades scheduled periodically over the next 20 years. **Table 9** estimates the economic impact of the envisaged direct spending in the first two years of construction, focusing on Output[11], Gross Geographic Product (GGP)[12], jobs, and nominal household income.

Table 9: Direct, indirect and induced impact of construction spending related to GGP, output, household income and jobs in the first two years of construction

Economic measure	Direct	Indirect	Induced	Total
Production (output, R' billion)	R6,1	R7,8	R3,6	**R17,4**
Gross Geographic product (GGP, R' billion)	R1,4	R2,8	R1,4	**R5,6**
Jobs (number)	4 751	15 441	4 195	**25 107**
Household income (R' billion)	R0,8	R1,3	R2,7	**R4,7**

Source: Multi-Purpose Business Solutions SAM model

Note that employment creation does not necessarily imply NEW jobs but sustainable employment for employees of contracted service providers not operating at full capacity. If the company doesn't have spare capacity, additional workers may be appointed, in which case NEW jobs would be created during the construction phase. Thereafter, the employment opportunities would taper away. Highly skilled and skilled jobs would likely be reserved for persons from outside the area if no persons with the requisite skills reside in the Northern District. It is also imperative that the recruitment process should promote gender equality by employing women wherever possible.

The information provided in **Table 9** indicates the following for the initial two years of construction:

- An estimated R6,4 billion in capital investment could generate R17,4 billion in **new business sales**, referred to as the production (or output) that creates demand for business activity during construction.
- The increase in production output could add R5,6 billion (net of the import leakage) to the **GGP** of the COCT.
- The project could sustain about 25 107 (direct, indirect and induced) **employment opportunities** (refer to net jobs movement below).
- **Household income** from job opportunities could increase by R4,7 billion.

Using a similar approach, the impact of capital expenditure on the COCT economy during construction can be estimated over the long term (22 years). This impact is represented by an income and output multiplier, an indication of temporary job opportunities that would taper away after the construction period, and the impact on household incomes of those workers directly or indirectly involved in the construction phase. The impacts are direct, indirect and induced, with the latter representing the spending of salaries and wages in the local economy.

Figure 18 illustrates the annual impacts for the individual items used to assess the impact, with the initial construction envisaged to peak in the initial construction years. To give effect to the long-term impact of capital expenditure, the analysis is extended to include a further 20 years of capital expenditure in nominal terms. **Table 10** indicates the total impact economic impact of the envisaged direct capital spending associated with the construction of the CWA, focusing on Output (production), Gross Geographic Product (GGP), the net movement in jobs and household income over 22 years.

[11] Output is the quantity of goods or services produced within a specific period.
[12] Gross Geographic Product is the total monetary or market value of all the finished goods and services produced within a region's borders in a specific time period.

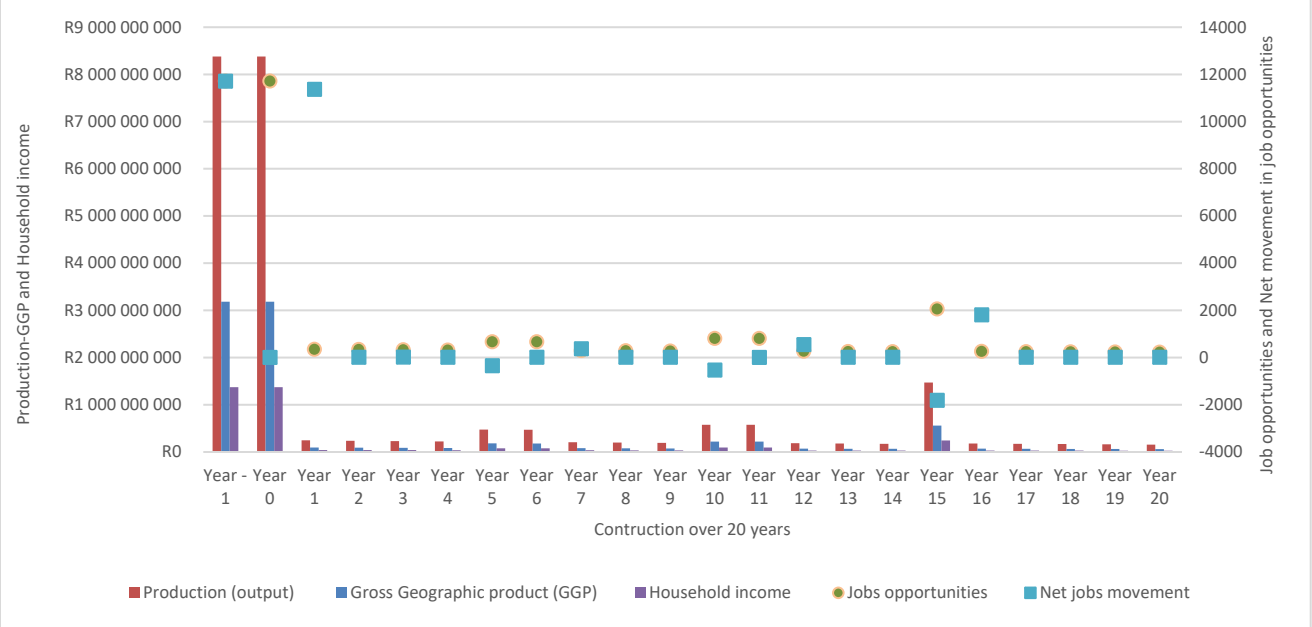


Figure 18: Impact of annual capital expenditure during the initial 2 years of construction and 20 years thereafter

Table 10: Impact of capital expenditure over 22 years

Economic measure	Total	Average (p.a.)	Maximum (Year -1)	Minimum (Year 20)
Production (output, R' billion)	**R23.2**	R1.1	R8.4	R0.2
Gross Geographic product (GGP, R' billion)	**R8.8**	R0,4	R3.2	R0,059
Jobs (number)	**32 433**	1 474	11 707	217
Household income (R' billion)	**R3.8**	R0.173	R1.4	R0.025
Net jobs movement (number)	**11 420**			

Source: Multi-Purpose Business Solutions SAM model

The information in **Table 10** indicates the following for the construction period of 22 years:

- The estimated capital investment could generate R23,2 billion in **new business sales**, the production (or output) that creates demand for business activity with an average expenditure of R1,1 billion per annum. The highest output impact of R8,4 billion was achieved in Year -1, and the minimum was achieved in Year 20.
- The increase in production output could add R8,8 billion (net of the import leakage) to the **GGP** of the COCT in nominal terms. The average GGP contribution is R400 million annually, with the highest impact of R3,2 billion in Year -1 and the lowest of R59 million in Year 20.
- The **household incomes** from the workers could result in an additional spending of R3,8 billion, which translates to an average of R173 million per annum.

The net movement in jobs during the 22 years of ongoing construction is intended to address the issue of over-estimating opportunities resulting from capital expenditure. The premise is to establish the baseline from the first capital expenditure and adjust the number for each successive year. This approach initially results in a net movement of 11 420 (direct, indirect and induced) employment opportunities during construction, including ongoing capital expenditure requirements. These job opportunities reflect the net movement commencing with a base figure of 11 707 in Year -1. It is envisaged that a total of 32 433 direct, indirect and induced jobs would arise from the capital expenditure on a nominal basis over 22 years, including the initial construction period of two years and ongoing capital expenditure for a further 20 years.

The difference between job opportunities and net movement in jobs, as illustrated above, highlights the need to add or reduce the number of workers required in any year depending on the estimate of capital expenditure, i.e. there is a causal relationship between capital spending and delivery of infrastructure and superstructure.

Development Alternatives
Alternatives 2, 3 and 4 would require more capital input and thus generate more economic income and employment opportunities than the No-Go Alternative 1. Runway Alternative 2 would retain the cross runway in Phase 1, potentially adding slightly more capital costs to the construction activities.

Cumulative Impact
Similar projects in the COCT would act synergistically to create more demand for supplies and services, which, due to the multiplier effect, would act as a catalyst for further economic growth and employment.

Mitigation measures
No mitigation applies as it represents a positive impact. However, businesses and workers must register on the CWA website and participate in the CoCT procurement strategy, community forums, skills development, and learning initiatives. It is also imperative that the recruitment process promote gender equality, with women employed wherever possible.

Impact Rating
The impact would be **low positive** for Alternative 1, and **high positive** for Alternatives 2, 3 and 4. Nearby developments could contribute to a **high positive cumulative** impact.

6.3 Operational Phase

The most significant concerns for the operational phase relate to the sense of place, traffic, noise, and air pollution, the risk of crime and informal settlements, and the impact on surrounding communities, business operations, and land values. On the positive side, the proposed development would address a growing need for transport facilities and amenities, sustain additional employment opportunities, and contribute to economic income. Although the current development rights for CWA allow up to 301 daily Air Traffic Movements (ATMs), the landside capacity would be inadequate to support such a high number. This report thus assumed a lower number of ATMs for Alternative 1 than for Alternatives 2, 3 and 4 (estimated 208 ATMs at full capacity).

6.3.1 Provision of transport infrastructure

Nature of impact
The CWA expansion would address a growing demand for transport infrastructure in the COCT.

Scope and consequence of impact
CTIA is the primary airport for the City of Cape Town and Western Province, with scheduled commercial air traffic – both international and domestic – as its main focus, at the expense of GA operators (flying schools, aircraft maintenance, fixed-based operators, charter companies, etc.). From a technical aviation perspective, mixing large with small aircraft reduces airspace capacity because of the turbulence created by the large jets. The proposed upgrading at the CTIA will include refurbishing the domestic arrival terminal, expanding the international terminal, and realigning the runway to increase landings and departures and accommodate the new generation of large aircraft such as the Boeing 747-800 and A380.

The CWA intends to serve as a "*reliever*" airport for the CTIA in a complementary role within South Africa's network of airports and airfields. It is envisaged that the bulk of General Aviation at CTIA would relocate to CWA. Most air traffic movements would be light aircraft on an unscheduled basis (e.g. flight training, charter and recreational flying); the remaining activity would comprise scheduled commercial operations (Cape Winelands Airport Limited, 2022). The airport would also serve as a significant multimodal transport hub given its strategic location alongside

the Saldanha and CT Port-linked Mellish Station (Rail), and only a few kilometres from the N1 highway, enabling efficient sea-rail-road-air linkages.

Lanseria International Airport, north of Johannesburg, serves as a secondary airport for Oliver Tambo International Airport. The absence of information on its socio-economic impact over the past 50 years makes it difficult to draw parallels with the potential impacts of the CWA expansion. What is clear, is that Lanseria Airport has not stifled the development of surrounding land portions; just the opposite is occurring, with a new set of improvements announced in July 2024 that would further lessen the strain on OR Tambo. A fuel depot, new fixed-based operator facilities, taxiway renovations, new maintenance, repair, and overhaul facilities are among the recent additions. The Lanseria area is slated to become one of Gauteng's first Smart Cities with the establishment of the Lanseria Smart City near Lanseria International Airport. The airport in the heart of the development centre would be the primary economic engine propelling the city's expansion.[13]

H & A Planning (2024) indicated that the proposed CWA development would address the need for a secondary airport and diversion capability. “CWA as an alternate airport instead of Port Elizabeth or OR Tambo Airports for flights inbound to CTIA would result in cost savings due to the shorter diversion distance, which results in less fuel weight being allocated to the reserve. With increasing air travel demand, a secondary reliever airport is necessary to alleviate congestion at Cape Town International Airport (CTIA) and support future growth. The development would alleviate hangar shortages and relocate general aviation from CTIA, reducing congestion in airspace and on runways. Both CWA and CTIA are vital for unlocking economic development and ensuring the aviation industry's sustainability, aligning with best practices observed in thriving global cities. Having two international airports would also create healthy price competition and service offerings between the airport operators as opposed to being exposed to a monopolistic situation as is the case with Cape Town’s port.”

Although many I&APs expressed support for a second airport in the Western Cape, others believe that the CTIA has sufficient capacity to meet current and future demand (in PHS Consulting, 2024a). A few respondents expressed concern that it may compromise recreational aviation in the area, particularly those at the Morningstar and Stellenbosch Airfields. Some I&APs believe that the additional operational cost of operating two airports less efficiently if demand is low, and the cost of additional government support resources (if the airport acquires international status) should also be considered.

ACSA (2024) indicated that CTIA would have sufficient capacity to manage the anticipated growth in visitor numbers (anticipated to double by 2050), with no need for a second commercial international airport so close to CTIA. However, ACSA CEO Mpumi Mpofu said that the proposed CWA will not pose a threat to CTIA and emphasised that the two airports can co-exist and complement each other[14].

The CTIA may experience a level of product market displacement[15] from travellers (also referred to as demand displacement) over the medium term. This type of displacement refers to the degree (expressed as a percentage) to which the effects of not using CTIA any more or less frequently produce additional economic activity in favour of CWA that reduces activity at CTIA and that would not have occurred if the intervention (i.e. the construction of CWA) had not occurred (TNS Research International, 2012).

Development Alternatives

Alternatives 2, 3, and 4 can accommodate larger aircraft and more passengers than the No-Go Alternative 1 because they provide more landside infrastructure.

[13] https://mybroadband.co.za/news/business/386494-south-africas-new-lanseria-mega-smart-city-plan-and-what-it-will-look-like.html; (https://dailyinvestor.com/south-africa/75314/the-south-african-international-airport-where-everything-works/

[14] Cape Winelands Airport is no threat to Cape Town International, says Acsa CEO Mpumi Mpofu, dated 29 January 2025).

[15] Displacement indicates the diversion of demand in monetary terms and people from existing businesses to new businesses in the same area or from one area to another.

Cumulative impact
Similar projects (in particular, the proposed improvements at CTIA) would create more supply in the transport sector and demand for associated supplies and services in the COCT. However, if there is insufficient demand to take up the increase in supply, it could jeopardise the viability and sustainability of both CTIA and CWA.

Mitigation measures
No mitigation applies as it represents a positive impact.

Impact rating
Our assessment suggests that the impact would be **low positive** for Alternative 1, and **high positive** for Alternatives 2, 3 and 4. Given the CTIA improvements, a **high cumulative impact** is expected.

6.3.2 Increased vehicular traffic

Nature of impact
The transport, commercial and service activities would increase vehicular movement along the access routes.

Scope and consequence of impact
Several I&APs expressed serious concern about the impact of the proposed CWA development on the area's traffic flows and the road infrastructure's ability to manage the traffic flows (PHS Consulting, 2024a). According to respondents, Durbanville is experiencing serious problems with increasing expansion and overloaded trucks taking shortcuts through neighbourhoods. Increased vehicular movement may lead to road degradation, congestion, and safety concerns for current and future residents of Fisantekraal and Greenville Garden City. Many Fisantekraal residents walk along the Lichtenburg and Klipheuwel Roads, but no sidewalks, traffic signals, pedestrian crossings or lights exist. The proposed development would increase the number of people travelling to the airport. Local residents indicated that construction of roads to accommodate the increase in traffic would disrupt agricultural activities. The traffic on the R304 road has already increased, forcing farmers to find alternative routes to other parts of their farms. The R304 towards Stellenbosch, and especially the interchange with the N1, pose daily challenges with vehicles that cannot get onto the R304 from the N1 in both directions. Similar problems are experienced on the R302 and R312. The expected surge in traffic would result in congestion, longer commute times, and heightened risks for residents, especially if the existing rural infrastructure is ill-equipped to handle such changes.

The **Transport Impact Assessment** (ITS, 2025) indicates that most of the study intersections currently operate at an acceptable Level of Service (LOS) during peak hours (2024 Background Traffic Conditions). However, several intersections, including Klipheuwel Road/Lichtenburg Road, Lichtenburg Road/Boys Biers Drive, and Klipheuwel Road/Arum Lily Street, experience significant delays (LOS F) during peak periods. Upgrades are recommended for Klipheuwel Road/Lichtenburg Road, including the installation of a traffic signal and additional turn lanes, which are expected to improve the LOS to B. Planned future developments and access management plans (AMPs) for Lichtenburg Road (MR213) and Klipheuwel Road (MR188) include changes to intersection configurations and realignments, which are expected to reduce demand at some constrained intersections. These upgrades are recommended as part of the Background Traffic Conditions scenario, i.e. independent of CWA.

Phase 1 forecasts indicate traffic levels of 2,5 million annual passengers in Phase 1, reaching 5,2 million annual passengers in the 2050 planning horizon, Phase 2. To accommodate the increase in passengers, the following access phasing is proposed (**Figure 19**):

1. Mellish Road would be the initial connection from Lichtenburg.
2. The East-West link to Klipheuwel Road when Bella Riva constructs this. CWA to engage with Bella Riva landowner/developer to establish if feasible to build Lucullus Road extension and/or the East-West Class 3 road. The East-West Class 3, at this stage, is the most likely to come first.
3. The ultimate link would be via the northern extension of Lucullus Road once the EIA approval has been completed by the City of Cape Town. The alignment and road reserve requirements of Lucullus Road bordering the west edge of the site must be confirmed.

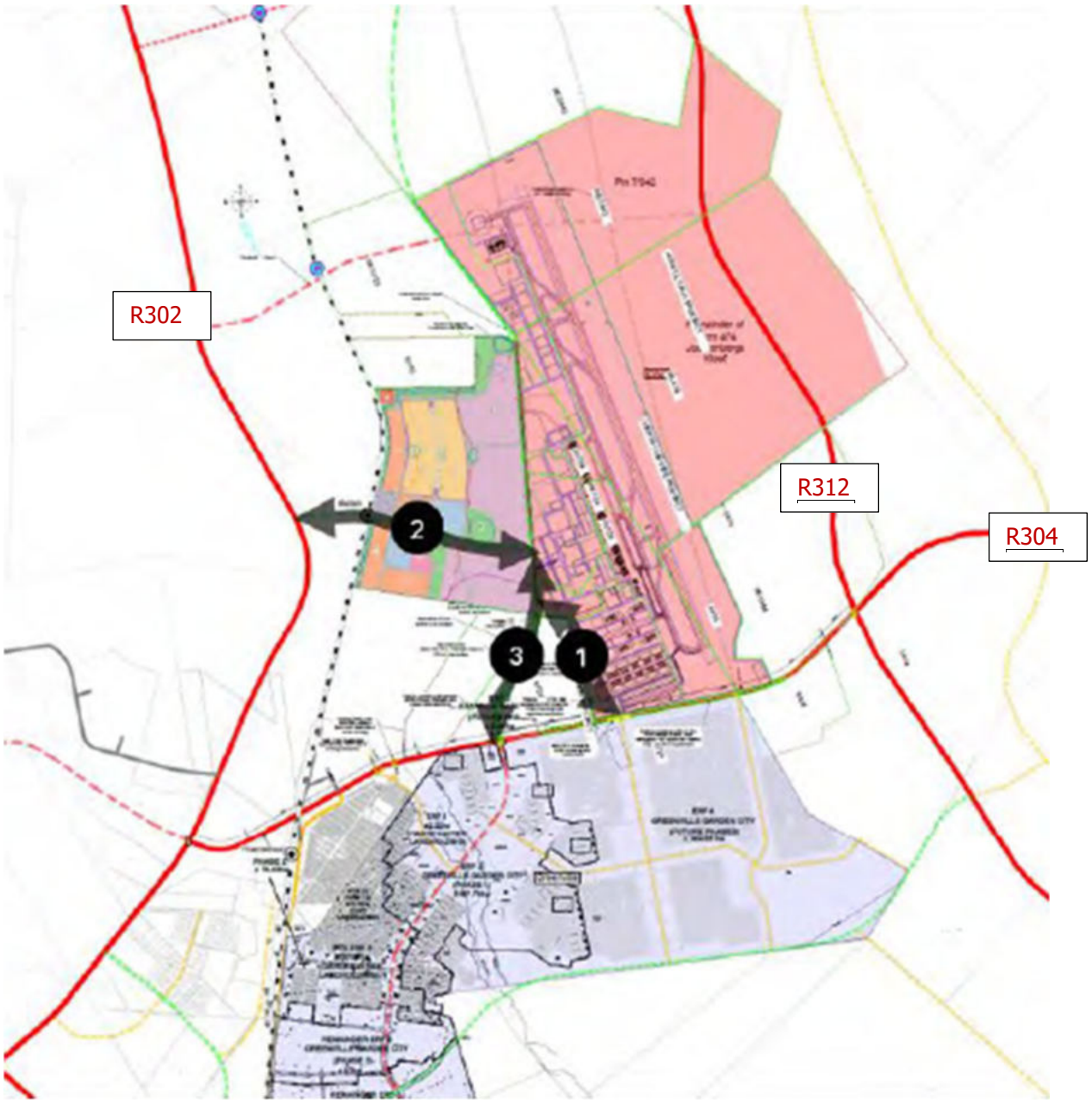


Figure 19: Site access opportunities via 1, Melish/Lichtenberg (R312); 2, Bella Riva; 3, Lucullus Road (R302)
Source: ITS, 2025

Given multiple developments planned in the Fisantekraal area, over 4 000 background development trips would be added to the road network during the PM peak hour for the 2032 Background Traffic Conditions. This would trigger the need for road upgrades, especially along Klipheuwel and Lichtenburg Roads. The proposed upgrades include the dualling of Klipheuwel Road, the installation of traffic signals at several intersections, and the construction of additional turning lanes. The Klipheuwel Road/Arum Lily Street intersection would be converted to a left-in, left-out (LILO) configuration as part of their access management plan. With the proposed upgrades in place, capacity constraints are expected at some priority-controlled intersections. However, alternative routes via signalised intersections such as Klipheuwel Road/Darwin Road and Lichtenburg Road/Dulah Omar Street would help alleviate traffic congestion.

The **2032 Total Traffic Conditions** considered the impact of Phase 1 of the CWA, the realigned Mellish Road access, and the East-West link from Bella Riva as a secondary access. The proposed upgrades include a traffic signal at Lichtenburg Road/Mellish Road, turning lanes at Lichtenburg Road/Koelenhof Road, and a dual-lane roundabout at the East-West Link/CWA Access intersection. As with the 2032 Background Traffic Conditions, capacity constraints are expected to continue at the priority-controlled intersections along Klipheuwel and Lichtenburg Roads. However, alternative routes via signalised intersections on Klipheuwel Road/Darwin Road and Lichtenburg Road/Dulah Omar Street would help alleviate congestion. Additionally, the Klipheuwel Road/Olifantsrivier Avenue intersection is expected to reach capacity during the PM peak hour. This traffic can be redistributed to the Klipheuwel Road/Okavango Road intersection, which has sufficient capacity. A **2032 Sensitivity Analysis of** using only the Mellish Road/Lichtenburg Road access for Phase 1 showed that the proposed upgrades in the 2032 Total Traffic Conditions scenario would be sufficient to accommodate the traffic generated by CWA Phase 1. Mellish Road is therefore the only access required to accommodate the CWA Phase 1 traffic. It is, however, recommended that the East-West link across Bella Riva Phase 1 be extended to the airport by CWA when the road reserve is available.

The City's EMME model was updated to evaluate the impact of Phase 2 of the CWA for the **2050 scenario**, which included the total extent of the future developments in the area and assessed the R300 northern extension along with several new road links, including the Darwin Road extension, and the extensions of Lucullus Road and the East-West links. The results indicated that the future road network would be sufficient to accommodate future developments, including Phase 2 of the CWA. The future developments would require several upgrades to be implemented as more than 4 000 peak-hour trips would be added to the road network. The construction of the R300 northern extension, along with new road links such as the Darwin Road and Lucullus Road extensions and the East-West links, is expected to reduce the demand at some of the study intersections. Therefore, it is recommended by ITS (2025) that the construction of these road links be fast-tracked to ensure that the intersection upgrades are not abortive in the future.

Development Alternatives
Alternatives 2, 3 and 4 would attract more traffic than Alternative 1.

Cumulative Impact
Further development and densification along the Darwin corridor are underway and would generate significant additional traffic on the access routes. The Traffic Impact Assessment concluded that the impact of CWA would be relatively low compared to the other future developments in the area.

Mitigation measures
A number of recommendations are made in the Transport Impact Assessment to address potential problems related to the background and forecasted traffic flows. It also recommended that an amended TIA be prepared to accommodate changes in intersection upgrades over time.

Impact Rating
The Transport Impact Assessment concluded that the impact of the CWA would be **low negative** for Phase 1; an updated TIA would be required for the future phases.

6.3.3 Sense of place

Nature of impact
The proposed CWA expansion would impact the sense of place for surrounding land users.

Scope and consequence of impact
Sense of place generally refers to how people perceive places, whether they are streets, communities, cities or regions. This may influence their well-being, how they describe and interact with a place, what value they place on something, etc. A sustainable community resembles a living system in which human, natural and economic elements are interdependent and draw strength from each other (Roseland, 1998). Community members generally recognise and support people's sense of well-being, which includes a sense of belonging, a sense of place, a sense of self-worth, a sense of safety and a sense of connection with nature.

A **Heritage Statement** (Townsend, 2020) noted that the airfield is an interesting relic of wartime need and the need for coastline defence. The four structures on the site are derelict and unused and have no special significance or meaning, whereas the landing strips have functional significance only. The **Draft Heritage Impact Assessment** (Aikman Associates, 2024) concluded that agricultural activity has irrevocably transformed the properties acquired for the proposed CWA development over the last 300 years. From an archaeological perspective, it can be concluded that although isolated MSA and LSA stone tools may be exposed below the topsoil during site preparation, the significance is likely low. None of the farmsteads in the study area appears to be of aesthetic, historical or architectural significance, although they contain structures older than 60 years. There would be no significant threat to archaeological heritage resources, and the two farmsteads to be lost are not considered conservation-worthy.

The proposed CWA expansion would constitute a transport hub, including retail and service-related commercial activities. The site is currently used as an airfield, but to a limited extent and only for small aircraft. A larger operation would affect neighbouring land users who may enjoy a more rural character, with their sense of place negatively affected by the visual impact (buildings instead of open veld), aircraft noise, air pollution and increased traffic along the access routes. Road users along the access routes would be affected by increased traffic, but the most significant impact would be aircraft noise along the flight path. Several I&APs expressed concerns that the proposed development on the sense of place would "destroy the rural character of the immediate area (PHS Consulting, 2024a). It would also impact all communities along the flight path - from Joostenbergvlakte to Klipheuwel and Mikpunt. Rural areas are cherished for their peaceful surroundings, tight-knit communities, and lack of industrial intrusion. The Winelands Urban Area is an economic hub, but also a cultural and aesthetic treasure that attracts local and international tourists. The development may accelerate development in the area, potentially spoiling the scenic landscape and encroaching on limited open space that should be geared towards restoring and sustaining biodiversity".

The **Visual Impact Assessment** (Filia Visual, 2025) determined that the proposed CWA should be Moderate overall for the Operational Phase of the development. The impact assessment results indicated medium significance in five of eight instances, and three indicated Low significance (i.e., site-specific impacts for which the Construction Phase impact assessment already accounts and impacts on scenic resources located at greater distances from the site). The construction phase visual impacts could be lower than the operational phase in five instances (mainly due to the distance from viewers and the staggered duration of the various construction phases). For site-specific visual impacts, the significance of Construction phase impacts could be higher than in the Operational phase. Construction phase activities associated with impacts on scenic resources located at greater distances from the subject site returned the same results as during the Operational phase. However, the *cumulative* visual impact of the construction phases should be considered Medium in significance, given the total duration of construction activities between 2027 and 2050.

Concerns raised by I&APs (PHS Consulting, 2024a) about the impact of the proposed CWA expansion on the health and well-being of residents were linked to the following:

- **"Noise** from passing aircraft could significantly impact receptors close to the airport, as well as those along the aircraft's flight path. Increased aircraft activity and road traffic would amplify noise pollution.
- Airports and aviation increase **air pollution** due to aircraft, ground vehicles, and other airport-related activities, which could impact the health of nearby residents and add to the burden on local public health services.
- **Fuel and oil emissions** that seep into aquifers can contaminate nearby boreholes and affect the water that feeds animals and crops.
- Concern about **biodigesters** that produce odorous gases, noise, and potential runoff of polluted water."

Several new residential developments in the planning stages or approved for the Northern District (**Figure 20**), relatively close to the CWA. The approved **Bella Riva Lifestyle & Country Estate** is a mixed residential and lifestyle golf estate development that includes an 18-hole golf course, housing units, sports facilities and schools. **Greenville Garden City** is a 767-ha private/public partnership between the City, the Provincial Government and Garden Cities to construct 16 000 homes across the economic spectrum. Further south is **Buh-Rein Estate**, earmarked to accommodate 12 000 residents, a family restaurant, clubhouse and sports facilities. The Phase 2 retirement village offers 418 independent and 43 assisted living apartments. **Lucullus Gardens** is a mixed-used development that

includes 2 387 residential units (80 m^2 each), business, retail, institutional facilities, industrial and life science components.

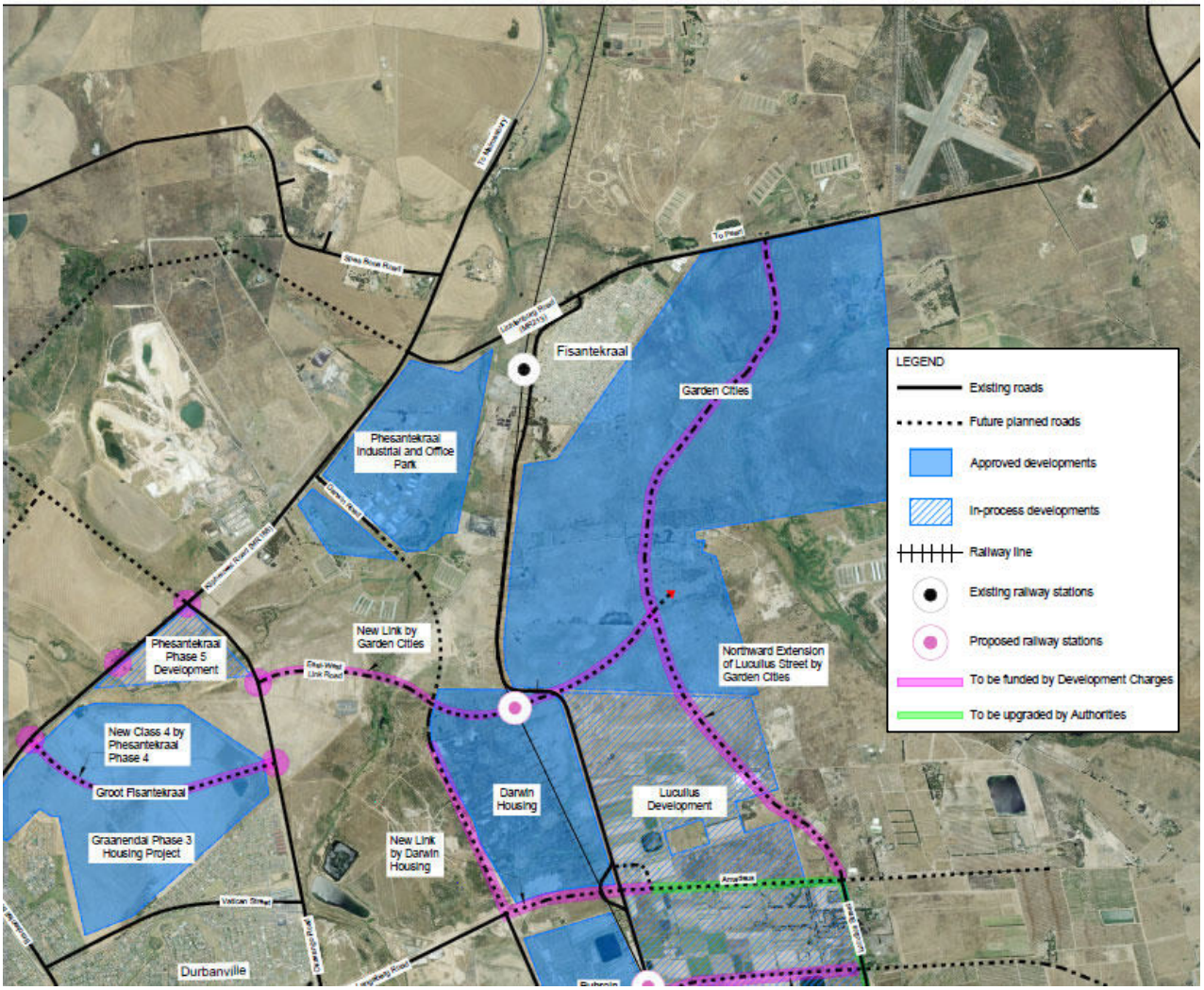


Figure 20: Residential areas near the proposed CWA development
Source: Innovation Transport Solutions (2021)

The **Noise Impact Assessment** (DDA Environmental Engineers, 2024b) indicates the day-night noise contours (L_{Rdn}) from the new runway 01/19 operating at maximum capacity (**Figure 21**). The impact zones would extend beyond the development area boundaries, primarily towards the north and the south, but also towards the west and east. The 55 dB(A) impact zone would reach 4 km north of the airport's northern site boundary in a north-north-westerly direction to just outside the eastern boundary of the Klipheuwel residential area. This contour would be situated over mainly agricultural land north and east of the airport. Towards the west, the 55 dB(A) contour would extend approximately 300 m into the Bella Riva residential development, measured from its easternmost point. The 55 dB(A) noise contour would reach 3.3 km south of the airport, overlapping the Greenville Garden City area (covering approximately 1.02 km^2). There is a small area of 0.11 km^2 within the Greenville Garden City area and immediately south of the runway, where the noise levels would be between 60 dB(A) and 63 dB(A). Given the categories identified by Bell (2001), the latter could lead to extra-auditory physiological effects in humans.

International studies concluded that the impact of noise on the sense of place from a social impact perspective, relate the level of noise as defined by decibels (dB(A)). Bell (2001) identified different acceptable noise levels (i.e., without undue complaint) for different locations and threshold levels when harmful effects start to occur. The

average noise levels in different locations are indicated on the right, with 45-55 dB(A) daytime and 35 – 45 dB(A) nighttime noise associated with residential areas. An important threshold for acceptable noise levels is 55 dB(A); anything higher would negatively impact sensitive receptors. If the noise levels increase by more than 5 dB(A) above the acceptable level, sporadic complaints from surrounding communities may be expected. A 10 dB(A) increase may result in widespread complaints, whereas 15 dB(A) above acceptable levels may result in threats of action. Noise levels above 45 dB(A) may impact people's sleeping patterns, whereas noise levels above 75 dB(A) may cause hearing loss.

Objectives	Noise levels at which harmful effects begin to occur, dB(A)
Prevention of hearing loss	75-85
Prevention of extra-auditory physiological effects	65-75
Prevention of speech interference	50-60
Prevention of interruption of sleep	45-50
Satisfying subjective preferences	45-50

Source: Bell, 2001

Several studies have reported on the impact of aviation noise on human health. The following are verbatim abstracts from some of these studies:

Aviation Noise Impacts: State of the Science

Noise is considered one of the most detrimental environmental effects of aviation. There is abundant evidence that aircraft noise exposure in the vicinity of airports is related to annoyance, and some evidence that the annoyance response has increased in recent years. There is sufficient evidence for a marked negative effect of aircraft noise exposure on children's cognitive skills, with some evidence that insulation of schools could mitigate this. There is also sufficient evidence that aircraft noise disturbs sleep and can impair sleep recuperation, but further research is needed to establish reliable noise exposure–response relationships and best mitigation strategies. Studies are suggestive of impacts of aircraft noise on health, but inconclusive with respect to quantification of exposure–response relationships, with a limited number of studies conducted to date. Mitigation of these various noise effects is necessary to protect the population living in the vicinity of airports and to address potential constraints to air traffic movements.

Basner M, Clark C, Hansell A, Hileman JI, Janssen S, Shepherd K, Sparrow V. (2017): Noise Health, 19(87): 41-50.

Living with aircraft noise: Airport proximity, aviation noise and subjective well-being in England

Airport expansion is an issue of intense public debate due to the potential impacts on climate change and the quality of life of affected local communities. This paper is the first study to analyse the relationships between airports and multiple subjective well-being measures by merging national-level population statistics with noise measurement maps for seventeen English airports. The presence of daytime aviation noise was found to negatively impact five subjective well-being measures. We found a marginal negative association with every additional decibel of aircraft noise. We found no significant association between well-being and living within night-time noise contours or living in close proximity to an airport. Living under air traffic flight paths harms peoples' overall and momentary well-being, equivalent to around half the effect of being a smoker for some well-being measures. The subjective well-being method findings support a wider revealed preference literature showing lower market demand in areas affected by aviation noise.

Lawton & Fujiwara (2016): Transportation Research Part D: Transport and Environment, 42: N104-118

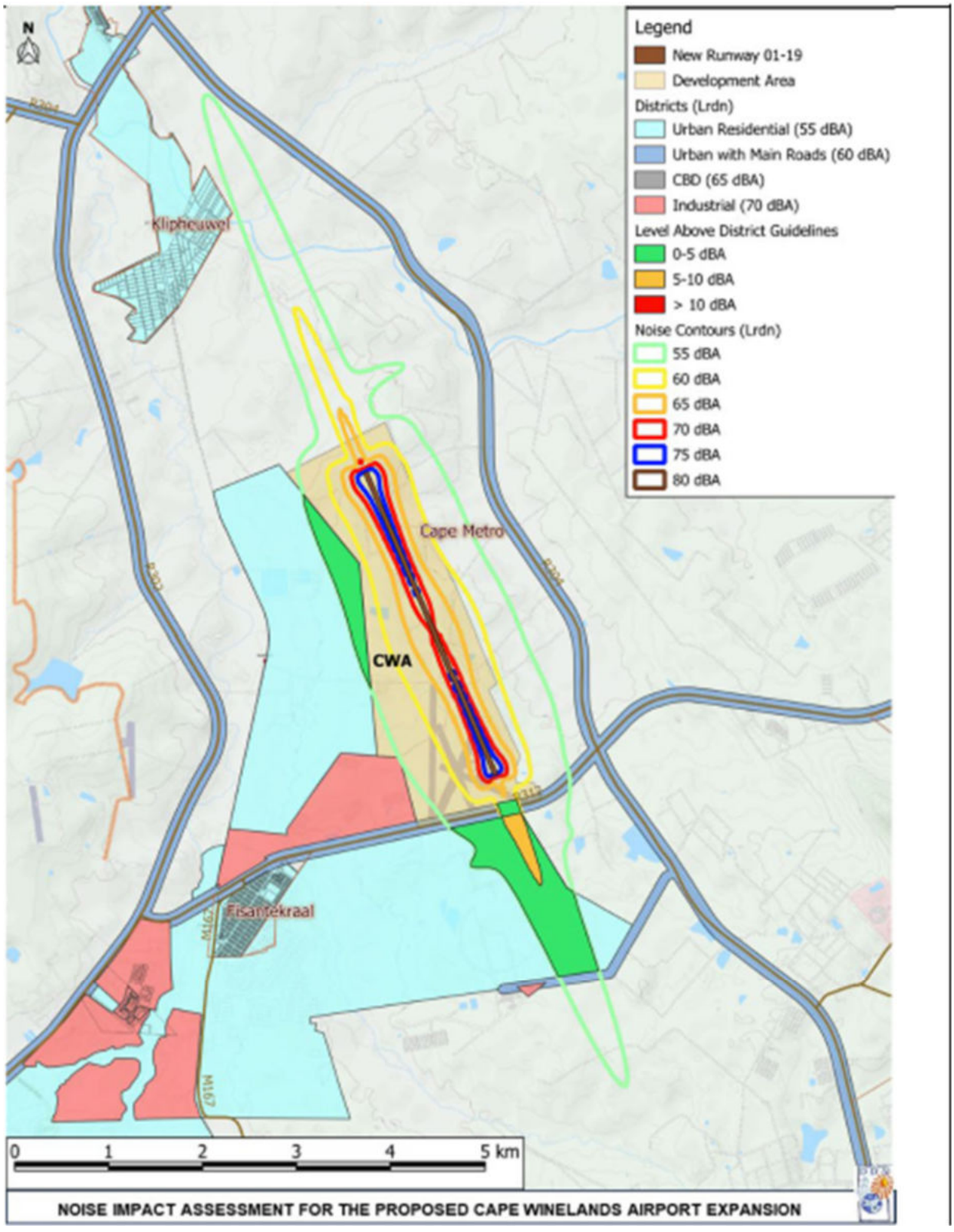


Figure 21: Day-Night Noise Rating Level (L_{Rdn}) at full capacity
Source: DDA Environmental Engineers (2024b)

Location	Day dBA	Night dBA
Rural residential	35-40	25-35
Suburban residential	40-50	30-40
Urban residential	45-55	35-45
Commercial	55-65	45-55
Industrial	60-70	50-60

The **Air Quality Impact Assessment** (DDA Environmental Engineers, 2024a) indicated that airport operations are expected to impact the local air quality around the runway, the taxiways and the airport apron areas. Jet engines emit various pollutants, including nitrogen oxides (NOx), sulphur oxides (SOx), carbon monoxide (CO), volatile organic compounds (VOCs) and particulate matter (PM). Ground support, such as ground power units, air conditioning units, and vehicles used for airport operations, can also emit the same air pollutants, contributing to local air pollution, especially during take-off and landing. Increasing vehicular traffic on the main access roads to the airport can result in increased vehicle emissions that may contribute to local air pollution.

Development Alternatives

Given the larger landside buildings and operations, Alternatives 2, 3 and 4 would impact the sense of place more than the No-Go Alternative 1. The **Visual Impact Assessment** (Filia Visual, 2024) rated the visual impact significance for the No-Go Alternative as neutral (no significance), and a generally **low to moderate negative** impact for Alternatives 2, 3 and 4 after mitigation.

The **Noise Impact Assessment** (DDA Environmental Engineers, 2024b) assessed three scenarios:

- Scenario 1: Existing operations at full capacity (No-Go; up to 301 daily Air Traffic Movements (ATM)
- Scenario 2: New runway in [first] operational year (Alternative 3 with 29 ATM)
- Scenario 3: New runway at full capacity (Alternative 3 and 4, with 208 ATM at capacity)

The Noise Impact Assessment indicates the following for areas within the different L_{Rdn} contours:

	Area within L_{Rdn} Noise Contour dB(A)						Significance rating before/after mitigation
	55-60	60-65	65-70	70-75	75-80	>80	
Scenario 1	2.47	0.77	0.25	0.02	0.00	0.00	High Negative / Moderate Negative
Scenario 2	1.44	0.51	0.15	0.03	0.00	0.00	Low Negative / not specified
Scenario 3 & 4	10.30	3.81	1.60	0.63	0.23	0.00	High Negative / Moderate Negative

The **Noise Impact Assessment** concluded that in **Scenario 3**, when the new airport and runway reach capacity, the length of the L_{Rdn} 55 dB(A) impact zone would reach 4 km north of its northern site boundary (excluding the Klipheuwel residential area). The noise level on the south-eastern part of the Klipheuwel community is expected to reach 49 dB(A), per the SANS 10103 guideline for Urban Districts with little road traffic. Towards the south, the 55 dB(A) noise contour would extend only 3,3 km; it would overlap the Greenville Garden City development and cover an area of approximately 1,03 km^2. Immediately south of the runway, there would also be a small zone of 0,11 km^2 within Greenville Garden City where the L_{Rdn} reaches between 60 dB(A) and 63 dB(A). Towards the Bella Riva area, the L_{Rdn} 55 dB(A) contour would extend approximately 300 m from its easternmost point of this development (an area of 0,38 km^2). From the N70 day-night contours, it is evident that an area (approximately 1,2 km^2) within the Greenville Garden City would experience more than 30 events of 70 dB(A) L_{Amax}. This is considered significant, and mitigation measures in terms of appropriate land use planning should be implemented for this zone. This zone that should be considered for appropriate land use planning is smaller than the 1,6 km^2 for Scenario 1.

The Klipheuwel residential area falls within the 5-10 events contour but outside the 20-30 events. The number of events that exceed the 70 dB(A) LAmax during night-time, i.e. between 22h00 and 06h00, are expected to be only three, and their contour is contained around the northern section of the new runway, within the airport development site. Similarly, the number of events that exceed the 60 dB(A) LAmax during night-time is 3, and its contour is primarily around the northern section of the new runway. This contour marginally extends beyond the airport site boundaries and covers a small portion of the northern Bella Riva development area. However, this is considered of low significance since it only refers to 3 events and would take place before 11h00. The investigation

of noise abatement operational procedures should be inflated before the new runway reaches its full capacity, considering the recommended noise monitoring around the airport and noise modelling of the applicable mitigation measures.

The **Air Quality Impact Assessment** estimated the potential impacts for the three scenarios mentioned above. The air quality impact zones for the new runway at full capacity (Scenario 3) would extend beyond the airport site boundaries in a north-westerly and south-easterly direction. The air pollutant levels would be within their respective air quality standards, except for the highest maximum 1-hr NO_2 concentrations within small areas north and south of the runway, but within specified legislation. The air pollutant levels at the identified community receptors, including at Fisantekraal and Klipheuwel, were well within the standards, with the overall air quality impact considered low significance.

Cumulative Impact

Given the distance between the CTIA and CWA site, there are no cumulative impacts linked to traffic, light, and air pollution. However, air traffic to and from the two airports would follow a similar route, resulting in more aircraft passing over the Northern District residential areas, impacting their sense of place.

The Air Quality Impact Assessment (DDA Environmental Engineers, 2024a) indicated a few existing emission sources within a 5 km radius of the project area, such as the Fisantekraal Wastewater Treatment Works (WWTW, less than 1 km northwest), County Fair Primary Processing Plant (2 km south), Claytile brick factory (4 km southeast), Clay Industry brick factory (5 km southwest) and ICSA Durbanville crematorium (4.5 km southwest of the CWA). The cumulative CO, NOx and PM10 concentrations are expected to be below the guidelines for community and sensitive receptors. The only receptors that may be affected by the crematorium operations are primarily those within the Darwin Industrial Park area.

Mitigation measures

Management actions and mitigation measures highlighted in the Visual Impact Assessment should be implemented to mitigate the visual impacts successfully. However, some impacts, such as certain lighting installations, present very little opportunity for mitigation, and they would remain moderate in significance. Implementing mitigation measures related to noise and air pollution would reduce the potential negative impact on nearby residents. The Noise Impact Assessment recommends various actions that could minimise the noise impacts, such as encouraging airport-compatible land-use planning, noise reduction technologies and strategies, and the introduction of 'passive' mitigation measures.

The **Air Quality Impact Assessment** recommended various mitigation measures for Scenario 3 in consultation with the various stakeholders. In line with the noise impact recommendations, the airport-compatible land-use planning immediately south of the new runway would be recommended. As such, the identified potential mitigation measures are:

- Encourage airport-compatible land-use planning
- Implement measures to decrease the queuing lines
- Limit the length of the course of taxiing
- Shutting down as many engines as possible when idling and taxiing
- Reduce reverse thrust use during landing
- Utilise aircraft-serving equipment with "cleaner" technology
- Investigate the provision of electricity at terminal gates to minimise the use of the auxiliary power units and ground support equipment

The **Noise Impact Assessmen**t recommended various mitigation procedures, as well as a monitoring network and monitoring plan. However, it also stated that the identification of the most suitable and cost-effective mitigation measures, together with a realistic time schedule for their implementation, can only be a result of consultations between the various stakeholders associated with all the airport operations, and taking into consideration the safety and security requirements associated with these airport operations.

Impact Rating

The Visual Impact Assessment concluded that the proposed CWA development (Alternative 4) would have a moderate negative visual impact after mitigation for lights and a low negative for site-specific visual impacts and scenic routes and cultural landscapes. The Air Quality Impact Assessment found that the overall impact with mitigation for Scenario 3 would be expected to be slightly lower than the unmitigated one, but the overall significance rating would not change. The Assessment also recommended establishing a continuous air quality monitoring station at the northern CWA site boundary to monitor SO_2, NO_x, PM_{10} and benzene, with biannual reporting to the authorities. Based on the specialist reports cited above, the residual impact on the sense of place (following mitigation) is anticipated to be **very low negative** for Alternative 1 and **medium negative** for Alternatives 2, 3 and 4. Together with other nearby developments, the CWA expansion would contribute to a **high negative cumulative** impact on the sense of place.

6.3.4 Increase in local crime

Nature of impact

Transport and commercial activities may contribute to an increase in local crime.

Scope and consequence of impact

Several I&APs expressed concern about a potential rise in crime and the impact on security due to the proposed CWA expansion (PHS Consulting, 2024a). “The rural areas under consideration enjoy relatively low crime rates, but this equilibrium can be disrupted by introducing an airport and the associated influx of people, vehicles and activities. Increased population density and economic activities linked to the airport can attract criminal elements seeking to exploit the new opportunities. There is increasing gang violence, theft, muggings, drug issues, and hijackings in the Fisantekraal area, which may pose a threat to those travelling to and from the airport, including passengers and staff. The Greenville and Fisantekraal Communities are suffering from a lack of police resources, with only a satellite police station and one police van monitoring the entire area. Increased crime in an area with inadequate police and security services could very well turn the beautiful Cape Winelands into the next hijacking hotspot, targeting tourists.”

The transport hub and associated activities could attract criminals searching for soft targets. As highlighted in **Section 7.2.5**, the SAPS Crime Statistics reported that contact crimes against other persons (murder, sexual offences, attempted murder, common assault, common robbery and robbery with aggravated circumstances) dominated in the Kraaifontein area in October - December 2024, accounting for 53% of all community-reported cases (**Figure 17**). There was also a high incidence of drug-related crime (546 cases) and various types of burglary and theft (a total of 619 cases). An interesting statistic is the relatively high number of malicious property damage cases, with 188 reported this quarter.

Development Alternatives

Alternatives 2, 3 and 4 could have a higher impact than the No-Go Alternative 1 as more and larger aircraft would use the airport. However, the area's security problems may continue or be influenced by activities unrelated to the proposed development.

Cumulative Impact

Other industrial or residential developments nearby could have a cumulative impact in attracting criminals searching for easy targets.

Mitigation measures

Co-operation between the Developer and contractors is essential to ensure the area around the proposed development remains secured. On-site security measures, such as perimeter fencing, controlled access, security guards, and patrols would minimise the risk.

Impact Rating

The residual impact would be **very low negative** for Alternative 1, and **low negative** for Alternatives 2, 3 and 4. The site is far from the CTIA, but nearby developments (particularly Greenville Garden City and Bella Riva) could contribute to a **medium negative cumulative** impact.

6.3.5 Risk of informal settlements

Nature of impact

Large developments may attract job seekers who settle on nearby vacant land in anticipation of employment.

Scope and consequence of impact

In many cities worldwide, informal settlements are typically positioned on the urban periphery, underused spaces or land unsuitable for formal structures, such as slopes or wetlands. Informal settlements around the City of Cape Town have grown significantly since 2000, with an estimated 150 000 households in 2019 scattered across hundreds of informal residential areas in Cape Town (Cinnamon and Noth, 2023), including around CTIA (**Figure 22**).

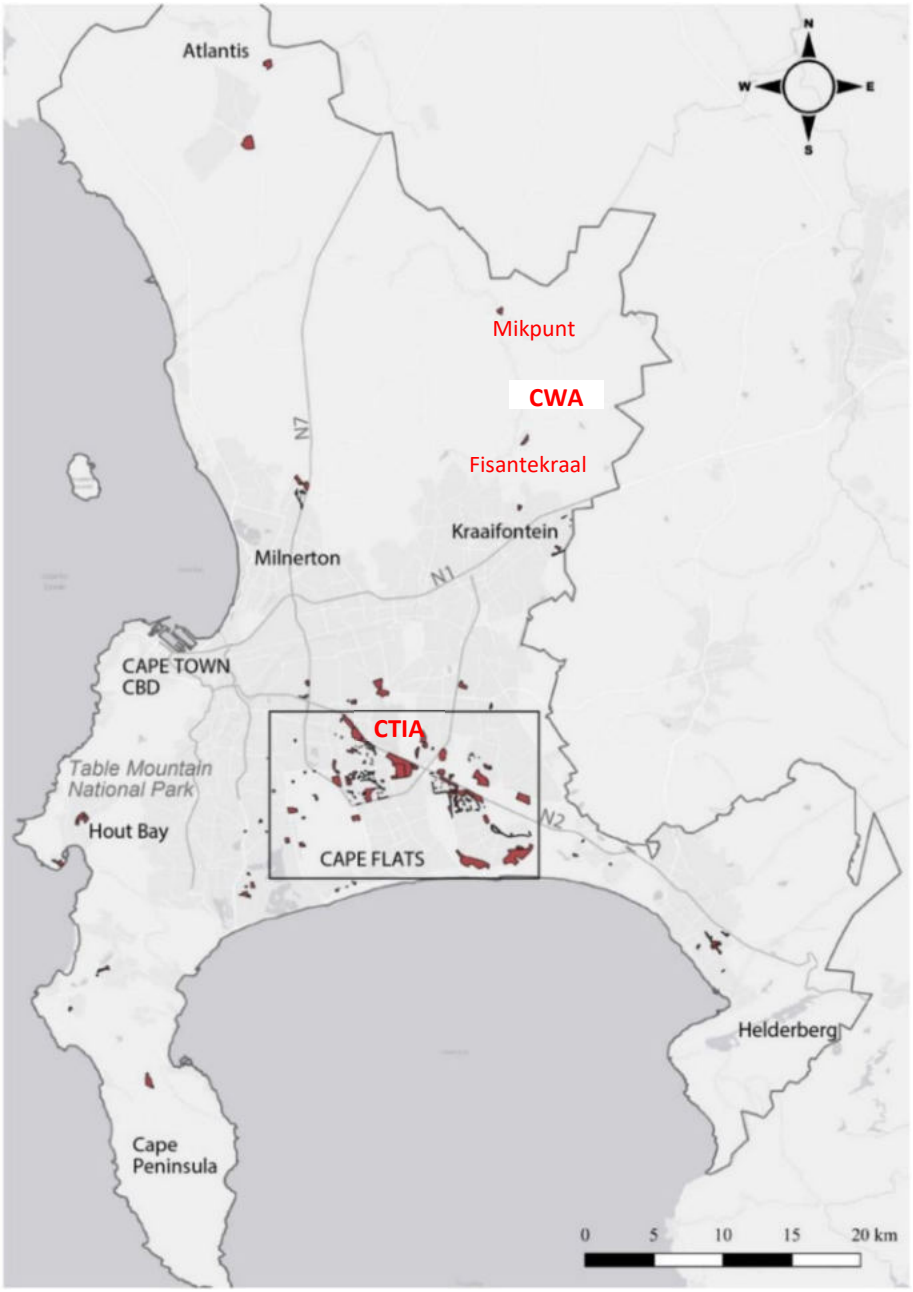


Figure 22: Informal settlements in the City of Cape Town
Source: Cinnamon and Noth (2023)

To allow for the proposed expansions at the CTIA, three informal communities on its periphery - Freedom Farm, Malawi Camp, and Blikkiesdorp - have been earmarked for relocating to formal housing settlements.

Preparations underway for upgrades at Cape Town International Airport
July 22, 2023

Despite resistance from informal housing occupants in the surrounding areas, preparations are underway for refurbishments at Cape Town International Airport, including developing the land on the eastern and western sides of Symphony Way, including the Symphony Way Urban Park. As part of this development, the CoCT has reportedly committed to relocating three informal communities – Freedom Farm, Malawi Camp and Blikkiesdorp – to formal housing, in alignment with the City's human settlements directorate's vision.
'The relocation of these informal settlements is also essential for the future development of the airport because the current informal settlements are currently on land required for the construction of the new realigned runway and a future second runway at Cape Town International Airport,' Acsa said. The City's Acting Mayco Member for Human Settlements, James Vos, said that this project has faced challenges due to criminal activity and unlawful occupation, prompting the City and Acsa to work together to address these issues. Thea Govindsamy from Acsa reportedly confirmed that a total of 3 200 state-subsidised Breaking New Ground (BNG) units are planned for construction on the Symphony Way Development Corridor.
Source: https://www.capetownetc.com/news/preparations-underway-for-upgrades-at-cape-town-international-airport/

Minister Simmers remains dedicated to the Airport Precinct Informal Settlement project[16]
06 Jul 2023

Tertuis Simmers, Western Cape Minister of Infrastructure, remains dedicated to ensuring that dignified housing opportunities are provided to the intended beneficiaries from the communities of the airport precinct informal settlement. Comprising of nine communities, the airport precinct informal settlement is divided into the following areas: the main site (Kanana, Barcelona, Europe, Vukuzenzele and Lusaka), airport infills (Lusaka Infills, Gxagxa and New Rest), Tsunami and Thabo Mbeki. Within this project, the Western Cape Department of Infrastructure intends to build 7 800 houses. Minister Simmers' department has allocated a budget of R3,2 billion to undertake land rehabilitation, bulk services, internal services and top structures during the various phases of the project. Additionally, the airport precinct main site is on a historic landfill site that requires rehabilitation through land remediation.

Due to the high population density in these areas, the department has identified Greenfield land parcels for transitional relocations of residents, i.e. Welmoed Estate (Penhill), Ithemba Farms, Airport Precinct (Airport Infills – Luyolo and Tambo Square), Kosovo (Farm 694 and Weltevreden Wedge) and Forest Village. Relocation to the Greenfield sites necessitates active participation and consent from all stakeholders. However, the relocation process has encountered challenges, leading to project delays. The department has prioritised relocating 800 beneficiaries from the southern corridor areas (greater Airport Precinct) to Forest Village to facilitate the development of the southern corridor. This commitment includes relocating 75 vulnerable beneficiaries, including the elderly and those with disabilities. Currently, the department has successfully relocated 799 out of the 800 beneficiaries. Progress depends on the relocation of the 3,000 qualifying beneficiaries to create space for land rehabilitation, which would help unlock the development of the airport precinct.

The informal settlements on the perimeter of the CTIA have raised concerns about a similar scenario unfolding at the proposed CWA. These concerns are fuelled by two existing informal settlements near the CWA site, i.e. Fisantekraal (southeast) and Mikpunt (northwest of the site). The City's Spatial Planning and Environment Directorate commented, "An informal settlement on land designated for agricultural use is 4,5 km northwest of the proposed expansion. As most of the land surrounding the CWA is currently zoned as agricultural or vacant, the development and expanded operation of the CWA logically adds to the risk of expanded informality in the area,

[16] https://www.gov.za/news/media-statements/mec-tertuis-simmers-airport-precinct-informal-settlement-housing-project-06

including within Discouraged Growth Areas and Environmentally Sensitive Areas. This aspect of the development adds both an element of risk and financial costs to the City."

H & A Planning (2024) also alluded to the potential of the CWA development to promote or act as a catalyst to create a more integrated settlement in terms of its nature, scale and location. The area directly west of the existing airport is designated for "industrial" use in the Northern District Plan, stretching up to the railway line north of Lichtenburg Road. The spatial planning intention is to create work opportunities in this area to prevent the larger Greenville and other residential areas from becoming embedded as mono-use dormitory towns.
In contrast to residential development, commercial and industrial nodes only develop where the cumulative agglomeration[17] advantages and symbiotic business interdependencies make it possible. Without a massive catalyst, the existing Fisantekraal Industrial area and the large extent between it and the airport will unlikely be developed as a thriving industrial employment node over the next 20 years.

Development Alternatives
Alternatives 2, 3, and 4 would have larger scales of operations than No-Go Alternative 1. However, as indicated above, multiple factors determine the risk, including potential employment and available land.

Cumulative Impact
Other industrial or residential developments in the area could have a cumulative impact in attracting job seekers who erect informal structures due to a lack of nearby housing.

Mitigation measures
Informal settlements usually arise on vacant land, whether in private or public ownership, in areas close to potential employment and transport, often as an extension of existing formal settlements. The CWA site is surrounded by private agricultural land with limited commercial activity in the area. It is not possible with any certainty to predict the origin or growth of existing or informal settlements, often influenced by multiple socio-economic factors. Formal housing could address the area's housing needs, eliminating the need for informal structures. Private landowners should ensure that unauthorised land settlements are dealt with by the authorities.

Impact Rating
The residual impact would be **very low negative** for Alternative 1, and **low negative** for Alternatives 2, 3 and 4. Nearby developments (particularly Greenville Garden City and Bella Riva) could contribute to a **medium negative cumulative** impact.

6.3.6 Impact on nearby farming and business operations

Nature of impact
A large airport may impact current and future farming and business operations in the area.

Scope and consequence of impact
The CWA site is in a rural area surrounded by several farms, businesses, and mixed-use developments that may be negatively affected by noise and air pollution. I&APs identified several aspects related to farming and business operations that could be affected by the CWA development (PHS Consulting, 2024a):

- "Decrease in land use for agriculture
- Food production affected by noise and air pollution
- Decrease in farming income due to livestock loss or reduced production
- Tourism activities in Winelands

[17] Agglomeration benefits refer to the concentration of new and expanded industries and businesses resulting from a new development due to synergies and savings between businesses.

- Economic impact on residents due to increases in living costs, taxes, and other financial obligations
- Economic impact on existing businesses due to potential disruptions
- Reduced interest in residential developments (e.g. Bella Riva and Greenville)
- Direct conflict with approved land use rights granted to other developments (e.g. Bella Riva and Greenville)
- Biosafety risks, including infections spreading to or from County Fair
- Specific impact on Mikpunt and Klipheuwel, particularly concerning traffic, road infrastructure, and economic considerations"

The **Agricultural Agro-Ecosystem Assessment** (Agri Informatics, 2025) concluded that, "while the dry summers and non-availability of irrigation water limits the agricultural potential of the study area to produce perennial crops, the adequate winter rainfall results in a high potential for winter cereal production in combination with a livestock component. However, the soil properties of Ptn 23/724 (clay deposits) and Rem 724 (deep sand with low water retention capacity) reduce the potential of these farm portions to medium-low. The loss of cultivated fields amounts to 168 ha, of which only ±60% (100 ha) are being cultivated per year due to the crop rotation system followed. The potential loss of 400 tons of wheat is equal to 0.01% of the national wheat consumption, 0.02% of the national wheat production and 0.03% of the Western Cape's wheat production, i.e. a negligible impact on food security."

Representatives from **County Fair** voiced concerns that an airport adjacent to the Fisantekop laying farm would significantly impact their operations. Current operations account for some 38% of our client's total laying stock in the Western Cape. County Fair has a permanent workforce of 79 people drawn from Fisantekraal, working or servicing the four farms, Quarryside, Wheatlands, Fisantekop and Vergelee. They are also concerned about light and noise pollution, which would seriously impact the laying stock. The laying stock is susceptible to disease and infection, and isolated and remote areas (such as Fisantekop) were chosen to develop the laying operations to minimise the risk of diseases.

Several Aviation associations expressed concern about the proposed expansion of CWA as it could impact their operations. ACSA supports the relocation of light general aviation to CWA, but not high-performance General Aviation, such as fixed-wing, jet-engine aircraft. In particular, the precincts surrounding CTIA may experience a significant economic impact if business is redirected to CWA, or if capital allocation is split between two airports (ACSA, 2024). The Stellenbosch Flying Club stated that their primary objective is safeguarding their operational interests and ensuring the design aligns with their flight school's unique requirements and commercial viability. The Morningstar Flying Club's concerns relate primarily to the potential changes to airspaces and the impact they may have on their free and safe use. The South African Hang-gliding and Paragliding Association (SAHPA) expressed concerns about the hang-gliding site at Rondebossie, and launch sites and flight corridors within 50 km.

Internal consulting firm Haskoning DHV (Pty) Ltd, operating as NACO Netherlands Airport Consultants (2022) assessed the demand levels and prepared specialist studies to indicate anticipated demand for CWA. It is our understanding that the industrial and commercial development earmarked for CWA is aviation-related and not conventional commercial space such as shopping centres, offices, etc. No direct comparison exists, and the dedicated nature of commercial aviation should not result in any displacement from current businesses operating in the area. Furthermore, the feasibility study prepared by CWA accounts for growth in the aviation market and unmet demand over the long term. As stated before, should growth occur and CWA is developed, CTIA is likely to experience some product market displacement, which refers to a movement in demand from CITA to CWA. However, as the market grows displacement reduced over time and this is likely to occur based on the demand growth projections (NACO Netherlands Airport Consultants, 2022).

Development Alternatives

Alternatives 2, 3 and 4 would have a higher impact on nearby businesses as more and larger aircraft would use the airport than for the No-Go Alternative 1.

Cumulative Impact

Other industrial developments in the area could compound any negative impacts on surrounding land users.

Mitigation measures
Implementing mitigation measures related to noise and air pollution would reduce the potential negative impact on nearby farming and business operations. The Agricultural Agro-Ecosystem Assessment indicated that further loss of productive farmland should be prevented by clear demarcation of the development envelope during construction, and no vehicle or other activity should be allowed outside of the demarcated area. Suitable run-off and soil erosion control measures and infrastructure should be designed and implemented to limit and restrict the loss or degradation of soil.

Impact Rating
The residual impact would be very low negative for Alternative 1, and **low negative** for Alternatives 2, 3 and 4. Nearby developments could contribute to a medium negative cumulative impact.

6.3.7 Impact on surrounding property values

Nature of impact
A new development may affect the current and future perceived value of properties in the surrounding area.

Scope and consequence of impact
The value of a property is driven by various factors, among others, supply and demand, interest rates, the contraction or expansion of the local economy, population growth rates and changes in disposable income to debt ratios. In addition, relative property values are based on the abundance of sites the market values or avoids. As these underlying characteristics and resulting relative advantages change, so do the relative prices, as these advantages are capitalised into land values. The future land value in the area also depends on spatial planning policies and the bulk supply of land permitted for various uses.

Several I&APs expressed concern about the impact of the CWA expansion on residential prices in the immediate area and along the flight path (PHS Consulting, 2024a). The factors that impact the sense of place, i.e. noise, pollution, traffic and sense of place, would also negatively impact the perceived value of residential homes, farms and business premises. New homeowners may prefer to buy property outside the noise cone, and current property owners may find it difficult to sell or rent their property – or would have to do so at reduced prices. Agricultural properties would lose value as planes land and take off so close to residential buildings and farm activities. The impact on residential and business property values is a particular concern to the developers of Bella Riva and Greenville Garden City, as it would impact future residential sales.

The residential areas likely to be the most sensitive to the proposed CWA development are those along or close to the flight path, particularly Mikpunt, Fisantekraal, Garden Cities' ongoing Greenville development and the proposed Bella Riva development. Residential property prices in the Fisantekraal area would be influenced by various economic and social factors, not only the presence or absence of a new airport. Noise, light and air pollution and traffic congestion are likely to be the strongest social factors as they impact the sense of place for nearby residents (Richard Summers Inc., 2025).

The Noise Impact Assessment (NIA) for the Cape Winelands Airport (CWA) Expansion evaluated the effect of aircraft noise on surrounding properties using Noise Rating Levels (L_{Rdn}) and N70/N60 noise event contours. This NIA was used to qualitatively assess the potential impact on property values in the area, benchmarking the exact metrics used in the Rode Consult Property Valuation Study for Cape Town International Airport runway realignment (2016). The Rode study applied internationally accepted depreciation percentages to determine the impact on property values in and around Cape Town International Airport.. The 55 dB(A) impact zone for Scenario 3 covers a total area of 10.3 km², extending 4.3 km to the northwest and 3.5 km to the southeast from the runway ends. Based on the maps of existing residential areas around CWA, this 55 dB(A) impact zone does not overlap with any existing residential dwellings, except for a single farmhouse north of CWA, situated on the eastern side of Klipheuwel. This means that only this farmhouse could experience a potential impact on property values. Based on global benchmarks, property devaluation is estimated at 0.7% per dB(A) increase beyond 55 dB(A), with higher-end properties experiencing up to 1.5% per dB(A). Consequently, the farmhouse may see a proximate reduction of 5,6% in value due to noise exposure.

Several international studies also concluded that homes under or near the flight corridors of national or international airports experience some diminution in property values (Mense & Kholodilin, 2014). The impact of flight noise levels on property values depends on various factors such as the flight path, the location of residents on either side of the flight path, the flight level of the aircraft, etc. The nature of the airport and the type of aircraft able to land there also play a role. The studies of aircraft noise impacts have focused on large airports catering to international and domestic air traffic, i.e. large and smaller aircraft.

Bell (2001, p. 7) concluded that the fact that a property is located near a noise source is not automatic evidence of a loss in market value. Bell suggests that in studying the "most likely impact" of airport noise on real estate values, it should be recognized that there are outlying extremes. Like many detrimental conditions, there is a segment of the market that appears to be almost immune to the effects, while at the opposite extreme, there is often a segment that would not purchase a property at any cost if impacted by a detrimental condition. For example, it is stated that a portion of the population seems imperturbable. If located close to an airport or under a flight path, these people are still not seriously disturbed. Nevertheless, noise is a significant issue for most people, and a segment of the population would live under a major flight corridor if enticed through a discount on the price. However, a slight majority of the market would not purchase a property close to a major airport *at any discount.* Similarly, a significant portion of the market would neither purchase a property close to a motorway nor a few miles from a major airport.

Case studies could assist in understanding practical outcomes for similar types of airports:

Eros Airport is Windhoek's second-most prominent airport after the Hosea Kutako International Airport (Iipinge, 2020). The airport handles over 75,592 passengers and 20,167 aircraft movements annually, from business, private and booked traffic, accommodating superior performance jet aircraft to Cessna aircraft, and regularly used aircraft for charter and fly-in safaris in Namibia. The results showed that aircraft noise negatively affects individuals residing close to the airport, decreasing the value of residential properties around the airport as people try to move to quieter places. The results revealed that homeowners in Academia (closest to the airport) sold their residential properties more frequently than those in other suburbs and tended to relocate to suburbs far from the airport. Although aircraft noise did not affect the houses' structures, it was a source of annoyance due to disturbance of sleep, rest, and relaxation and interfering with sporting activities. However, an assessment of average residential property values from 2011 to 2015 in three suburbs close to the airport revealed a minimal relationship between property values and noise pollution from aircraft activities. The study concluded that the value of residential properties is influenced by architectural design, quality of material used and size of the house rather than environmental issues such as noise pollution attributed to the nearby airport activities.

Cairns Airport (Queensland, Australia) is a small local airport that caters to neither domestic jet airlines nor international airlines. Although the noise levels and the amount of air traffic would seem minimal, they were sufficient to cause community concern (Bishop and Laing, 2020, p. 2). This study provides evidence consistent with prior research that airport noise can negatively impact the values of residential properties in zones within the flight paths of the particular airport. This study implies that when the expansion of any airport or residential development is being considered, the result is likely to have an impact leading to the diminution of the residential property values directly under the flight paths (p. 9).

These case studies showed that residential properties located within the noise cone may experience a negative impact on their perceived market value. For the CWA expansion, residential property owners may be concerned about the sense of place, visual impact, peace and tranquillity (increased traffic, noise and dust), privacy, and security. However, no existing residential properties are located within the 55 dBA noise contour identified by the Noise Impact Assessment (DDA Environmental Engineers, 2024b). The latter recommended that the proposed residential developments of Bella Riva and Greenville Garden City have an opportunity to consider and implement appropriate mitigation measures during the planning stages, considering the areas of impact in each development. The transition from four runways to a single longer runway isolates noise in a more manageable way, reducing its spread over multiple directions with potentially a positive outcome for property prices in areas that would have been affected if all four runways were used at full capacity. The proposed new noise footprint allows for better planning, mitigation, and zoning strategies.

Investors and developers recognise the economic opportunities associated with improved transport infrastructure, logistics, and commercial developments linked to the airport. The increased accessibility and future demand for land supporting airport-related industries - such as cargo handling, agribusiness, and logistics may have a positive impact on land prices, but this is uncertain at this stage This trend reflects the broader economic upliftment driven by the airport expansion, demonstrating that the overall impact on property values extends beyond noise considerations, including significant commercial and investment potential.

Land adjacent to the airport site may be in demand for commercial and/or industrial developments, thus increasing the perceived value of the properties. The properties adjacent to the CWA are predominantly zoned Agricultural, but there are a few exceptions, including the approved Bella Riva mixed-used development directly east of the airport. The Northern District is considered a growth and development node for the CoCT, attracting interest from developers for megaprojects. In general, properties inside the urban edge may experience demand for infill development, often increasing the perceived value of undeveloped properties. Properties outside the urban edge could also experience an increase in perceived value over time, which is often realised when the urban edge is adjusted to include said properties.

Lanseria International Airport is a good example of the positive impact of airports on surrounding property prices. It grew from a small airport that served general aviation and private aircraft to a fully-fledged secondary airport serving domestic and regional carriers. A new set of improvements would further increase its capacity, which would further lessen the strain on OR Tambo. In addition to the substantial development around the airport, the area is slated to become one of Gauteng's first Smart Cities, with strong residential growth expected.[18]

Development Alternatives

Alternatives 2, 3 and 4 would have larger scales of operations than No-Go Alternative 1, and they are more likely to impact surrounding property values.

Cumulative Impact

Other developments in the immediate area could compound any negative impacts on surrounding land users (e.g. sense of place and traffic flows). On the other hand, several large-scale developments in the area could increase the perceived value of undeveloped properties within the urban edge, particularly those forming part of a future airport precinct.

Mitigation measures

Implementing mitigation measures related to the sense of place would reduce the potential negative impact on residential property prices.

Impact Rating

The impact is unavoidable but can be partially managed if visual, noise and traffic concerns are effectively mitigated. For **residential properties**, the residual impact could be very low negative for Alternative 1, and **medium negative** for Alternatives 2, 3 and 4.

For **commercial and industrial properties** (including agricultural properties with the potential to be rezoned), the impact could be **very low positive** for Alternative 1, and **low positive** for Alternatives 2, 3 and 4. Other industrial developments in the area could contribute to a **high negative cumulative** impact for residential properties along the flight path, or **medium positive** for non-residential properties in the airport precinct.

18 https://mybroadband.co.za/news/business/386494-south-africas-new-lanseria-mega-smart-city-plan-and-what-it-will-look-like.html; https://dailyinvestor.com/south-africa/75314/the-south-african-international-airport-where-everything-works/

6.3.8 Bulk infrastructure requirements

Nature of impact
Bulk infrastructure services are to be supplied by the Developer, but require sufficient local capacity.

Scope and consequence of impact
Several I&APs expressed concern about the bulk infrastructure requirements for the CWA expansion as the envisaged project would require significant infrastructure changes in the area (PHS Consulting, 2024a). "The increased water demand for construction and operational needs may strain local water resources, impacting human and ecological requirements. Most of the surrounding farms rely on borehole water, but no plans for aquifer recharge or the sustainability of surrounding boreholes have been presented. This would substantially impact the provision of bulk infrastructure planned and gradually rolled out to cater for Greenville and its mixed land use approach if the CWA development potentially takes up the available capacity."

The following summarises the main bulk infrastructure requirements; refer to the relevant specialist reports for further information:

Electricity
The site has a 66 kVa Eskom supply, but renewable energy alternatives are being considered, including an on-site bio-digestor plant and a solar photo-voltaic system (Sands, 2025). A comprehensive power plan is being developed to ensure that the site and facilities would be self-sustaining in terms of renewable energy sources and resources. The proposed 12 000 kWh/d biogas plant would use organic waste and/or energy crops, and excess gas stored in bladders for consumption at night. CWA intends to generate electricity from photo-voltaic renewable sources of 20 to 100 MW with a battery storage system. However, the PV Power Source system would be subjected to a Glint and Glare Study to ensure the panels installed would have no impact on air traffic safety. In addition, a backup diesel generator power would be included for airport facility critical facilities.

Water Supply & Reticulation
The site borders the City's urban edge and water services provision is limited, with the closest existing accessible services about 3 km east of the CWA site. The site falls into the Spes Bona Reservoir supply zone, with a 400-mm main trunk supply pipe in the R312 Lichtenburg Road. The City of Cape Town indicated sufficient capacity in the Spes Bona reservoir to supply the CWA development, but the network infrastructure in the area is limited (Zutari, 2025). The existing network pipe diameters are restricted and should the CWA development connect to the network with the calculated demand, the flow velocities in the network would exceed acceptable levels. The CoCT indicated that the CWA development would only be able to obtain 25% (5.65 l/s of the calculated demand of 22.52 l/s) of its requested peak instantaneous demand capacity (Qp) from the municipal system. (This would only be 7.6% of the current calculated demand of 76 l/s). Additional measures would need to be implemented to account for the shortfall.

Based on the bulk water master planning for the City's northern edge, a proposal for bulk water supply to CWA and neighbouring developments was put forth to meet the medium and long-term water requirements for the CWA development. An initial proposal included constructing a 300 ML reservoir at the old Spes Bona reservoir site to enhance climate resilience and meet future water demand. An Environmental Impact Assessment (EIA) approved a pipeline from the proposed Spes Bona 3 Reservoir to Muldersvlei, and it was suggested that CoCT Water Reticulation evaluate the feasibility of constructing a reservoir at the proposed site for Spes Bona 3 using the EIA-approved pipeline route to supply water to the site and neighbouring developments. The reservoir size would be determined by CoCT Water Reticulation department, and financing could be partially offset by Development Contributions (DCs) from these developments.

Foul Sewer Drainage
The site is located on the urban edge, where sewage services provision is limited, and existing municipal services are located a considerable distance from the site. The site is not provided with municipal connections for foul sewer drainage, and the existing buildings at the airfield are serviced through septic tanks (Zutari, 2025). However, the site falls into a catchment area serviced by the Fisantekraal WWTW, close to the site. The areas in Fisantekraal drain to a series of pump stations where the sewage is pumped to the Fisantekraal WWTW in the north or Kraaifontein WWTW in the south. There are proposed developments nearby where municipal sewer lines are proposed, including the Greenville development to the south and the Bella Riva development to the east. These developments

include proposals to expand the municipal sewage network, which were considered possible opportunities to tie into the municipal network. However, these developments are still in the planning stage, and there is no confirmation that either development would have sewage infrastructure constructed in the short term.

Due to the limited network coverage, conveyance infrastructure must be implemented outside the site boundary to convey the sewage to the municipal wastewater treatment works (Zutari, 2025). Three options are considered: The first option is constructing an on-site packaged Sewage Treatment Plant (STP) to treat sewage on-site or constructing a pump station and associated rising main to pump sewage to the Fisantekraal WWTW. The package treatment plant would be designed as a closed system with all waste generated handled in accordance to the relevant City By-laws. The design would ensure that all treated effluent generated on-site would be effectively managed and disposed of in an environmentally sound manner. To enhance the system's reliability and resilience, an emergency overflow pond is proposed, which would provide a mitigation against spillage should there be a problem with the pump station.

The second alternative option is a pump station and rising main that conveys the sewage directly to Fisantekraal WWTW to the north rather than conveying the sewage to the southwest towards the municipal sewage network in Fisantekraal, which has spare capacity. If this option is pursued, a revised application to the City of Cape Town would be required to determine if an additional 549 kl/day is available in the municipal system.

The third (and preferred) option integrates a dual-treatment approach to manage effluent and meet non-potable water demands efficiently. Sewage from the development would be diverted through a pump system to a proposed on-site package treatment plant. This plant would treat the sewage to a standard suitable for non-potable water use, such as irrigation or flushing, thereby addressing the development's internal non-potable water requirements. To avoid excessive effluent production and maintain compliance with wastewater discharge regulations, the remaining sewage would be directed to the nearby municipal WWTW for further treatment and disposal. This approach aims to optimise effluent reuse, reduce pressure on the WWTW, and address environmental concerns with respect to the excess treated effluent generated.

Stormwater Drainage

The existing stormwater drainage services on the site are limited and mainly consist of open drains and limited pipework to drain areas around the existing airfield into the existing water courses (Zutari, 2025). A large portion of the site is a greenfield development from a stormwater perspective, and there are no formal municipal infrastructure services at the site from a stormwater perspective. A detailed Stormwater Management Plan is required to obtain final approval for the development. The Stormwater Management Plan would identify measures to comply with the Council's Management of Urban Stormwater Impacts Policy (C58/05/09); propose methods (structural controls) for removing, reducing, or retarding runoff flows, and preventing targeted stormwater runoff constituents, pollutants and contaminants from reaching receiving waters; and propose operation and maintenance procedures.

To address concerns regarding the potential attraction of avifauna to the proposed stormwater ponds, all ponds have been designed as dry ponds, except for Pond 2 (the rehabilitated quarry that currently has a permanent water body). In line with the City's stormwater management policy, all dry ponds are designed to provide 24-hour extended detention for the 1-year storm recurrence interval, ensuring no more than 24 hours of water retention. For Pond 2, excess stormwater above the permanent water level would be retained for 36 to 48 hours before receding to the permanent water level.

Development Alternatives

Alternatives 2, 3 and 4 would have higher bulk service requirements than Alternative 1.

Cumulative Impact

Other developments near the CWA would increase the local demand for bulk services.

Mitigation measures

Due to the current constraints in the municipal system, alternative potable water sources must be considered in the short to medium term (Zutari, 2025). In addition, consideration should be given to non-potable systems to reduce the demand for potable water. The strategy for water supply to CWA follows a phased approach and entails using groundwater as a primary supply source in the short term up until municipal infrastructure can either

supplement the groundwater supply or be the primary source of supply. Various mitigation measures would be investigated during the detailed design phase for Pond 2, which is currently a permanent water body. Close monitoring as part of the proposed Bird and Wildlife Hazard Management Programme, in collaboration with the avian specialists, would provide ongoing mitigation and ensure compliance with safety and environmental requirements.

Impact Rating
The engineering reports indicate that potable water, sewage, and electricity services are available in the area, and that there is sufficient capacity to accommodate the proposed CWA development if the Developer provides the necessary infrastructure and network connections. The residual impact would be **very low negative** for Alternative 1, and **low negative** for Alternatives 2, 3 and 4. The site is far from the CTIA, but nearby developments (particularly Greenville Garden City and Bella Riva) could contribute to a **medium negative cumulative** impact.

6.3.9 Local business opportunities

Nature of impact
The CWA expansion would create opportunities for small businesses in the goods and services sectors.

Scope and consequence of impact
A total of 350 000 m^2 of GLA includes Hangarage, Light manufacturing & Industrial, Logistics & Warehousing, Food Processing, Educational & Commercial Office Space, Retail, Events & Conferencing, Hotel & Guesthouse Accommodation, Bulk Aviation Fuel Farm and Public Filling Station. This would allow several independent businesses to conduct their activity on-site and create opportunities for other businesses to support a range of supply and support services. It is anticipated that operators based at CWA would partner with various regional tourist attractions to provide attractive packages, growing the Cape's status as the ultimate tourist destination.

The airport is located between the three major regional growth centres of Cape Town, Stellenbosch and Paarl and along north-south and east-west road networks, which provide numerous opportunities for transport-related businesses like public transport, car hire, fuelling, and parking would attract commercial passenger traffic at the airport. Commercial developments such as retail, food & beverage, and offices can support business traffic by providing complementary and convenient services. The combination of transport linkages and commercial activity can galvanise demand for light-industrial facilities such as logistics, warehousing and even air freight (Cape Winelands Airport Limited, 2021a).

ACSA (2024) expressed concern that businesses operating in the precincts surrounding CTIA may experience a significant economic impact if business is redirected to CWA. However, ACSA CEO Mpumi Mpofu said that the proposed CWA will not pose a threat to CTIA and emphasised that the two airports can co-exist and complement each other[19].

Development Alternatives
Alternatives 2, 3 and 4 would have a higher impact than the No-Go Alternative 1, with a higher demand for goods and services.

Cumulative Impact
The CTIA expansion may act synergistically to create more demand for airport-related supplies and services and stimulate further economic growth in the COCT. However, it is more likely that existing and new businesses closer to CWA would have a cumulative impact in creating new opportunities in the goods and services industries within the Northern District.

[19] https://www.iol.co.za/business/advice/cape-winelands-airport-is-no-threat-to-cape-town-international-says-acsa-ceo-mpumi-mpofu. dated 29 January 2025).

Mitigation measures
No mitigation applies as it represents a positive impact.

Impact Rating
The impact would be **very low positive** for Alternative 1, and **high positive** for Alternatives 2, 3 and 4. Nearby developments could contribute to a **high positive cumulative** impact.

6.3.10 Economic income and new employment opportunities

Nature of impact
Procuring goods and services, creating new employment opportunities, and spending wages and salaries during operations would benefit the COCT and Western Cape economies.

Scope and consequence of impact
A high-level estimate of the socio-economic impacts during operations also requires an analysis based on a SAM for the Western Cape, which could also apply to the COCT. **Table 11** estimates the economic impact of the envisaged direct operational spending associated with the CWA, focusing on Output, Gross Geographic Product (GGP), jobs and household income. Note that employment creation does not necessarily imply NEW jobs, but rather sustainable employment for employees of contracted services providers not operating at full capacity. For example, it could represent a new contract for a service provider with spare capacity. If the company doesn't have spare capacity, additional workers may be appointed, in which case NEW jobs would be created during operations.

Table 11: Direct, indirect and induced economic, household and jobs impact of operational spending over 20 years

Economic measure (R' billion)	Direct	Indirect	Induced	Total
Production (output, R' billion)	R36,1	R17,1	R22,8	**R76,1**
Gross Geographic product (GGP, R' billion)	R19,0	R5,7	R9,5	**R34,2**
Jobs (number)	57 073	17 122	28 537	**102 732**
Household income (R' billion)	R11,4	R2,7	R3,6	**R17,7**

Source: Multi-Purpose Business Solutions SAM model

Note that the figures represent the total economic and employment impacts in nominal terms for the first 20 years of operations:

- The operational phase, which includes a substantial component of maintenance expenditure, estimated at R36,1 billion in nominal terms, could generate R76,1 billion in **new business sales**, referred to as the production (or output) that creates demand for business activity.
- The increase in production output could add R34,2 billion (net of the import leakage) to the **GGP** of the COCT.
- Based on the operational expenditure, the CWA could sustain about 102 732 direct, indirect and induced **employment opportunities** over 20 years of operations.
- Due to the job opportunities created, household incomes from **job opportunities** could increase by R17,7 billion during 20 years of operations.

Based on the narrative above, it is possible to estimate the impact of the operational expenditure on the COCT economy during the first 20 years of operations on an annual basis. This impact is represented by an income and output multiplier, an indication of job opportunities, and the impact on household incomes of those workers directly or indirectly involved in the operations. The impacts are direct, indirect and induced, with the latter representing the spending of salaries and wages in the local economy.

The net movement in jobs over the first 20 operational years is intended to address the issue of over-estimating opportunities resulting from operational expenditure. The premise is to establish the baseline from the first expenditure and adjust the job movement for each successive year. This approach results in a net movement of 9 155 sustainable employment opportunities (direct, indirect and induced) during the first 20 years of operations. These job opportunities reflect the net movement commencing with a base figure of 1 712 in Year 1.

Figure 23 illustrates the annual impacts for the individual items used to assess the economic impact over the first 20 years of operations. The difference between annual job opportunities and net movement in jobs, as illustrated above, implies the change in employment in any year depending on the change in revenue, i.e. there is a causal relationship between revenue generated and the change in operations to achieve high levels of revenue, which means additional employment opportunities.

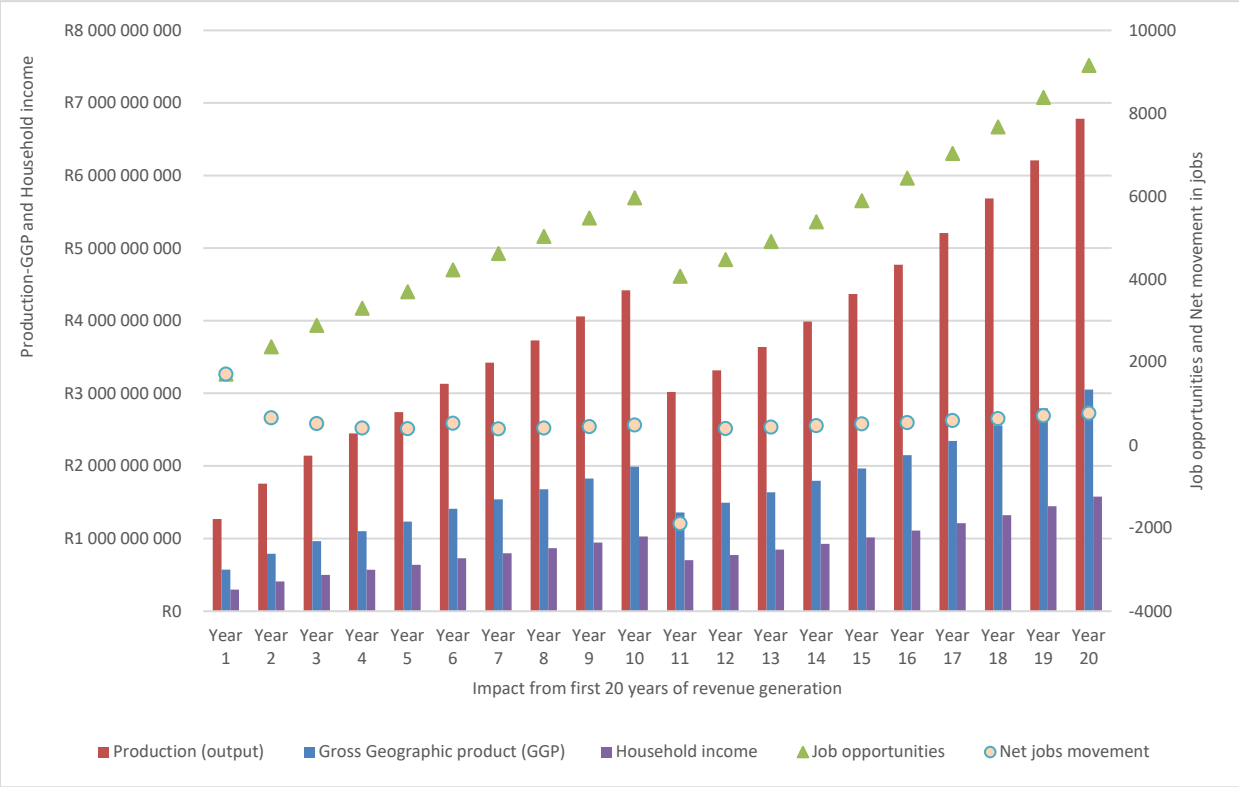


Figure 23: Impact of Operational expenditure on an annual basis over 20 years

CTIA is likely to experience a level of displacement for travellers and business activity that may impact direct and indirect employment associated with CTIA. The true impact can only be modelled with an in-depth additionality and displacement study, which is outside the scope of a Socio-Economic Impact Assessment.

Development Alternatives

Alternatives 2, 3 and 4 would have a higher impact than the No-Go Alternative 1, resulting in more employment and economic activity.

Cumulative Impact

Other development projects in the COCT could act synergistically to create more supply and service demand, thus catalysing further economic growth in the area. However, a directly competing airport may negatively impact business operations at or near CTIA if companies relocate to the Fisantekraal area or downscale due to reduced demand at the CTIA precinct. This could negatively impact the CTIA, leading to a social impact if people lose their

jobs. However, how this could unfold is unclear, and only once CWA operations commence would it be possible to ascertain shifts in business development patterns.

Mitigation measures

No mitigation applies as it represents a positive impact. However, the Developer should insist that the contractors demonstrate the use of local labour as far as possible. It is also imperative that the recruitment process should promote gender equality with women employed wherever possible.

Impact Rating

The impact would be **very low positive** for Alternative 1, and **high positive** for Alternatives 2, 3 and 4. Nearby developments could contribute to a **high positive cumulative** impact.

6.3.11 Revenue accruing to local authorities

Nature of impact

Monetary benefits accrue to the COCT through property rates and other utility charges such as water and electricity.

Scope and consequence of impact

The CWA would contribute to the fiscus during construction and ongoing operations as various taxes and levies would become payable or accrue to the national government and the City of Cape Town. The fiscus would benefit from individual and company taxes, individual taxes and levies, VAT and import duties. The City of Cape Town would benefit from Development Changes (DCs) based on the envisaged construction expenditure, property rates, and services (utilities).

Several assumptions are applied to determine the fiscal and monetary contributions:

- The period is 2025 to 2046, with the first 4 years earmarked for construction and 20 years for operations;
- Statutory rates and levies are applied as they relate to UIF, SDL, Company Tax, Import duties and VAT;
- Import duties are levied on aeronautical ground lighting (AGL) CAT II, GSE: tug, loaders, steps, pax busses, etc., GSE: fire tenders and equipment and baggage equipment;
- Marginal rates for PAYE (41% for skilled, 25% for semi-skilled and 18% for unskilled labour);
- Development charges are calculated per the DCs levied by or agreed to with the CoCT;
- Municipal property rates are estimated at 1,2% of the capital expenditure for initial construction, based on the 2023/24 property tariffs of the CoCT for 350 000 m^2 of commercial space developed over 20 years;
- Municipal services are assumed to be 1% of revenue;
- A discount rate of 10% is applied to determine the fiscal and monetary benefit in current terms (2023); this rate is used in the public sector and essentially equates to prevailing borrowing rates.

Table 12 indicates the fiscal and monetary impacts. In current terms, the CWA expansion could contribute R3,9 billion to central government coffers over 22 years, while the City of Cape Town could obtain R2,1 billion from rates and services based on the applied assumptions.

Table 12: Fiscal and monetary funds accruing to the two spheres of government in current terms

	R' million
National Government	R3 896.9
PAYE (Construction)	R575,4
Unemployment Insurance Fund (UIF)	R25.7
SDL	R25.7
VAT (net)	R1 534.4

	R' million
Company Tax	R1 355.9
Import duties	R31.1
PAYE operations	R316.0
Unemployment Insurance Fund (UIF)	R21.8
Skills Development Levy (SDL)	R10.9
City of Cape Town	**R2 055.9**
Municipal rates	R969.6
Municipal taxes	R1 051.2
Development charges	R35.1

Development Alternatives

Given their larger development footprints, Alternatives 2, 3 and 4 would attract higher rates and taxes than No-Go Alternative 1.

Cumulative Impact

Other development projects would further enhance the rate and tax base of the City of Cape Town, thus contributing to the City's revenue.

Mitigation measures

No mitigation applies as it represents a positive impact.

Impact Rating

The impact would be **very low positive** for Alternative 1, and **high positive** for Alternatives 2, 3 and 4. Nearby developments could contribute to a **high positive cumulative** impact.

7 SOCIAL INVESTMENT AND MONITORING INITIATIVES

7.1 Social investment and community engagement

Social investment initiatives have become a standard inclusion in the submission of development proposals to relevant government departments at the local, provincial, and national levels. Developers are required and expected to indicate to what extent the development project would contribute to the welfare of surrounding communities through social investment initiatives.

A need exists to align communities' development priorities with the project developers' social investment objectives. Multi-Purpose Business Solutions has prepared a framework to provide developers with a sense of direction when assessing what initiatives could be considered as part of a social investment programme. **Figure 24** illustrates a matrix consisting of four quadrants based on the nature of the intended investment and the "capital" introduced by the developer as part of the social investment.

	Abstract capital	Physical capital
Active Investment	• Grants • Bursaries • In-house training • Education • Development of small, medium and micro businesses • Youth training initiatives • Environmental initiatives (nursery and training initiatives) • Enterprise development opportunities	• Upgrading of community health facilities (e.g. clinics) • Upgrading and maintenance of sports fields • Construction of new skills development/training facilities • Provision or upgrading of infrastructure (with advantage for the community) • Development or conversion of existing buildings to multi-purpose centres • Community gardening project and farming projects
Passive Investment	• Establishment of community trust funds for environment and development • Provision of guarantees • Advancing preferential terms	• Build facility and transfer ownership to a community trust for application to the community • Maintenance of community facility

Figure 24: An illustrative matrix of social investment options for developers
Source: Multi-purpose Business Solutions ©
Notes:
Active and Passive investment of abstract capital. These investments refer specifically to time and funds invested in initiatives such as bursaries and in-house training. Passive investment refers specifically to the allocation of funds to a community trust or some other vehicle that assumes responsibility for the disbursement of the funds to community third parties and projects.
Active and passive investment in physical capital. Active participation implies direct investment in the needs of communities by the provision of new or upgrading of existing community facilities such as health care centres, schools and recreation and sports facilities. Passive investment in this context refers specifically to the establishment of a facility for the community, which is then transferred to a trust or other type of entity (vehicle) with the sole purpose of administrating and maintaining the facility on behalf of the community.

It should be noted that the term "social investment" in this context has a broad meaning. In this framework, a distinction is made between (1) physical and abstract capital reflecting the difference between actual funds invested in assets and "in-kind" investment in people, and (2) active and passive investment reflecting the degree of the developer's actual involvement in the community either directly or through a third party, which could be an entity or other vehicle.

A developer could select any one or combination of social investment initiatives illustrated in **Figure 24**. We suggest that a clear indication is provided in the application of the nature and scope of the social investment and whether or not a passive or active investment approach will be followed. Our assessment suggests that the type of

investment that should be considered by the Developer based on an agreement with various stakeholders must achieve the highest impact.

7.2 Monitoring framework

An essential component of determining the success of a project from a socio-economic perspective entails monitoring, reviewing and evaluating processes to assess the adherence to socio-economic obligations. Continuous and periodic monitoring and evaluation are required to ensure the achievement of milestones and the overall success of achieving the socio-economic objectives envisaged for the Project. The following activities are geared towards achieving acceptable and ongoing monitoring standards:

1. Regular field visits to the project and stakeholders benefiting from the project
2. A review after the first six months after implementation to assess the overall progress and achievement of the objectives and milestones related to the specified targets of employment, skills development, small business development and capacity building.

In order to monitor the performance related to the achievement of the socio-economic development obligations, the contractor should record and report progress with agreed socio-economic obligations. Typical reporting information should include:

- Actual total expenditure on Total Procurement;
- Actual total expenditure on Procurement of Materials;
- Actual total expenditure on Sub-contracting;
- Actual total employment categorised according to standard Occupational Categories; and
- Actual total payroll.

The successful implementation and development of the proposed project will ultimately be assessed based on the contribution the project makes during construction and operations to the social development and economic goals of employment creation, skills development and training, small business development and capacity building in the area. The following Key Performance Areas (KPAs) are outcomes based on the scope of social engagement activities:

- Procurement from, or sub-contracting to local enterprises;
- Procurement from, or sub-contracting to enterprises from outside the local area;
- Procurement of local materials/resources;
- Procurement of materials from outside the COCT;
- Recruitment process that promotes gender equality

Social impacts such as the influx or in-migration of job seekers will likely affect the area's local communities and other properties. This assertion is based on the nature, size and scope of the proposed project as a significant contributor to the aviation landscape and the ancillary requirements for the development of airports. Monitoring as a basis for understanding changes in the social landscape is required and should be reported on as part of the socio-economic monitoring proposed above. A system should be developed to assess the impact, and stage gate reviews should be considered to guide the required steps. This requirement should also be aligned with developing a Social Engagement Plan that should be implemented and form the basis of the above review.

8 SUMMARY OF IMPACTS & RECOMMENDATIONS

8.1 Summary of impacts

The question that needs to be addressed in the context of perceptions and concerns raised by Interested and Affected Parties (I&APs) is whether the proposed CWA development is desirable from a societal cost-benefit perspective. There would be both positive and negative socio-economic consequences if the project proceeds. To provide a perspective of the net societal benefits and costs for the various alternatives for the proposed project, the socio-economic impacts associated with the proposed development and their respective significance before and after the implementation of mitigation measures (i.e. the residual impact) are indicated overleaf, followed by a discussion of the different impacts.

The following table summarises the residual impacts of the four alternatives:

1) **No-Go Alternative 1** – development of the current airport within its current rights, i.e. four runways up to 1 454 m and 6 000 m^2 GLA (which is insufficient to support the approved 301 Air Traffic Movements)
2) **Runway Alternative 2** - a commercial and aviation hub (350 000 m^2 GLA) with a 3 500 m main runway at orientation 01-19 and initial retention of cross runway 14-32 in Phase 1
3) **Runway Alternative 3** - a commercial and aviation hub (350 000 m^2 GLA) with a 3 500 m main runway at orientation 01-19 (no cross runway)
4) **Preferred Alternative 4** – same footprint as Alternative 3, with minor changes (the fuel line was extended into the GA precinct; the internal precinct boundaries were corrected; three boreholes are indicated; the incoming potable line has been added)

Nature of the Impact	Rating after mitigation (Residual impact)			
	Alternative 1	Alternative 2	Alternatives 3 & 4	Cumulative (Alternative 4)
Construction				
Traffic flows along access roads	(scored as Low negative in Transport Impact Assessment)			
Nuisance factors (dust and noise)	Very Low (-)	Low (-)	Low (-)	Medium (-)
Influx of jobseekers	Low (-)	Medium (-)	Medium (-)	High (-)
Construction workers – local communities	Very Low (-)	Low (-)	Low (-)	Medium (-)
Increase in local crime	Very Low (-)	Low (-)	Low (-)	Medium (-)
Economic income and employment opportunities	Low (+)	High (+)	High (+)	High (+)
Operations				
Provision of transport infrastructure	Low (+)	High (+)	High (+)	High (+)
Traffic flows along access roads	(scored as Low negative in Transport Impact Assessment)			
Sense of place	Very Low (-)	Medium (-)	Medium (-)	High (-)
Increase in local crime	Very Low (-)	Low (-)	Low (-)	Medium (-)
Risk of informal settlements	Very Low (-)	Low (-)	Low (-)	Medium (-)
Nearby farming and business operations	Very Low (-)	Low (-)	Low (-)	Medium (-)
Surrounding property values – residential	Very Low (-)	Medium (-)	Medium (-)	Medium (-)
Surrounding property values – commercial/industrial	Very Low (+)	Low (+)	Low (+)	Medium (+)
Bulk infrastructure requirements	Very Low (-)	Low (-)	Low (-)	Medium (-)
New business development	Very Low (+)	High (+)	High (+)	High (+)
New employment opportunities	Very Low (+)	High (+)	High (+)	High (+)
Revenue accruing to public authorities	Very Low (+)	High (+)	High (+)	High (+)

Potential positive impacts – Preferred Alternative 4

1. **Provision of transport infrastructure:** The proposed CWA would serve as a "reliever" airport for the CTIA in a complementary role within South Africa's network of airports and airfields. It would alleviate congestion at CTIA and make land available for future expansions at the CTIA. It would also increase the available hangarage facilities in the market and unlock the Western Cape GA market, which is currently severely constrained.
2. **Employment opportunities:** The findings of the employment analysis indicate that the project could sustain about 32 433 (direct, indirect and induced) employment opportunities during construction, including ongoing capital expenditure requirements over 22 years of initial and ongoing construction. As a result of the job opportunities created through the proposed interventions, household incomes from job opportunities could increase by R3,8 billion over the total 22 years of initial and ongoing construction.

   During the initial 20 years of operations, the project could sustain about 102 732 direct, indirect and induced employment opportunities, adding R17,7 billion in household income.
3. **Economic income:** The proposed CWA expansion would contribute to the primary (raw materials, e.g., sand, stone), secondary (e.g., bricks, cement, roof tiles) and tertiary sectors (various professional services) of the local economy during the construction phase. The initial capital investment of an estimated R8,9 billion could generate R23,2 billion in new business sales during construction, referred to as the production (or output) that creates demand for business activity over the construction period. The increase in production output could add R8,8 billion (net of the import leakage) to the GGP of the COCT during construction. During an initial 20-year operational period, which includes a substantial component of maintenance expenditure, an estimated at R36,1 billion in nominal terms could generate R76,1 billion in new business sales.
4. **New business development:** The preferred Alternative 4 development plan earmarks 350 000 m^2 of GLA for commercial and general business. This would provide numerous opportunities for transport-related businesses like public transport, car hire, fuelling, and parking, would attract commercial passenger traffic at the airport. Commercial developments such as retail, food & beverage, and even offices can support business traffic by providing complementary and convenient services. Once the airports become operational, the tertiary sector in particular would benefit, but the primary and secondary sectors would also continuously benefit due to the linkages between the different economic sectors.
5. **Revenue accruing to the local authorities:** The development of the CWA could contribute R3,9 billion to central government coffers over 22 years in current terms, while the City of Cape Town could obtain R2,.1 billion from rates and services based on the applied assumptions in current terms.
6. **Surrounding property values:** Properties adjacent to the site may be in demand for commercial and/or industrial developments, thus increasing the perceived value of those properties.

Potential negative impacts – Preferred Alternative 4

1. **Impact on traffic flows:** A significant increase in traffic along the access routes can be expected during construction and operations, which would negatively impact surrounding land users in particular. A number of road upgrades have been recommended by the Traffic Impact Assessment; many of these are directed at background traffic related to other developments in the area.
2. **The influx of job seekers:** An influx of job seekers (mainly from the Northern District) during construction would lead to competition among local (Fisantekraal) residents for employment opportunities. Workers stranded in the area after the construction phase could also increase the demand for housing and social services over the longer term.
3. **Dust and noise (construction)**: Site preparation and the introduction of services would create dust and noise that would affect nearby receptors, in particular the residents of Fisantekraal to the southwest.
4. **Construction workers** may seek the local community for leisure and social activities. This could lead to social ills impacting local families and their social structures.
5. **Increase in crime levels**: On-site activities could attract criminals, but this could be mitigated with effective security measures and access control. Crime could include on-site petty theft, theft of building material, on-selling of security information, or burglary and theft at nearby properties.
6. **Sense of place (operations)**: A large airport would affect neighbouring land users who may enjoy a more

rural character, with their sense of place negatively affected by the potential visual impact, aircraft noise, air pollution and increased traffic along the access routes.

7. **Nearby farming and business operations**: Noise and air pollution may negatively impact nearby farming operations and businesses in the area.
8. **Surrounding property values:** Property owners in nearby neighbourhoods may be negatively affected due to a change in the sense of place. There are no existing residential properties located within the 55 dBA noise contour identified by the Noise Impact Assessment, offering new proposed residential developments an opportunity to consider and implement appropriate mitigation measures during the planning stages.
9. **Bulk infrastructure requirements** relate to the provision of bulk infrastructure for sewerage, water and electrical supply, solid waste disposal and stormwater management. The developer is responsible for the provision of these services, but the local municipality requires sufficient capacity to meet the additional demand. The engineering reports indicate that the required services are available in the area, and that there is sufficient capacity to accommodate the proposed CWA development if the Developer provides the necessary infrastructure and network connections.

Alternatives

No-Go Alternative 1 (development within current rights) would have similar impacts as Alternatives 3 and 4, but with much lower significance given the much-reduced construction and operation.

Alternative 2 (development with initial cross runway): The nature and significance of the impacts would be comparable to Alternatives 3 and 4. The construction costs to repair and decommission the cross runway are likely to be slightly higher, but this would be small compared to the total capital expenses.

Cumulative impacts

Cumulative impacts refer to any other developments and existing activities within the immediate area that could compound any positive or negative impacts of the proposed development. This usually refers to similar nearby developments, i.e. Cape Town International Airport (CTIA) about 22 km southwest of the CWA site. Given their distance and geographical location at the southern and northern ends of the CoCT, cumulative impacts linked to traffic, light and air pollution are unlikely. However, the CTIA precinct may experience some impact if business is redirected to CWA; the level of such an impact could only be ascertained once CWA operations commence. Furthermore, several residential developments in the Fisantekraal area in the planning or construction stages, such as Bella Riva Estate, Groot Phesantekraal, Greenville Garden City and Buh-Rein Estate, could contribute cumulatively to traffic, sense of place, etc. Multiple developments in the Fisantekraal area could compound employment opportunities and economic benefits. However, if introduced concurrently, additional developments in the immediate and surrounding areas may compound negative impacts. These typically relate to the sense of place, traffic, infrastructure requirements, crime and nuisance factors that could negatively impact nearby residents and business operations.

8.2 Recommendations

Many potential impacts could be mitigated by introducing the measures proposed by various specialists; these must be considered and implemented by the developer. Monitoring and evaluating socio-economic impacts and continuously assessing the outcomes would further inform the social and economic fabric and the impact on surrounding land users. The following mitigation measures related to the **socio-economic context** are proposed and should be consolidated into an Implementation Plan as part of the Construction Environmental Management Plan (CEMP) and/or Operational Environmental Management Plan (OEMP).

Pre-construction (CEMP)
A Procurement Strategy that includes the following and applies to the project: (a) Initiate the activity during the first phase of the development; (b) The strategy is the responsibility of the contractor(s) collectively under the guidance of the Municipality;

(c) Focus on opportunities for local labour in the surrounding areas and businesses as a priority. Contractors are required to indicate the geographical location of sub-contractors (businesses) and local labour;

(d) Local contractors invited to tender for work in the context of the terms and conditions included in RFP documentation, which would include skills development, on-site training, gender equality, etc.;

(e) Approved programme aligned with the future construction phases of Greenville Garden Cities, Bella Riva and other planned/approved developments in the area to minimise the impact on the greater community.

Pre-construction & Construction (CEMP)

A Communication Strategy that addresses directly and indirectly affected residents and surrounding landowners, with specific reference to activities, timelines and intended impacts related to the construction phase and all related activities associated with the implementation of the project (i.e. during the operational phase).

- **Objectives**
  - To orientate, generate awareness and gain positive attitudes among stakeholders as far as possible; and
  - To engage and inform stakeholders of progress regarding all phases of construction.
- **Target audience**
  - Property owners and users of the land portions directly surrounding the proposed activity; and
  - Other stakeholders and property owners that may be affected.
- **Major types of messages**
  - Inform directly affected residents on the periphery of the development site and others that would frequent the area;
  - The commencement date for construction activities related to the project;
  - Duration and extent of the construction activities and details of individual construction activities;
  - Progress updates, including any delays in a construction-related activity; and
  - Introduce appropriate signage to warn persons frequenting the area and those residing adjacent to the development area.

Construction phase	
Nuisance factors (dust and noise)	Dust and noise emissions during the construction period should be minimised through a Construction Environmental Management Plan (CEMP).
Influx of job seekers, impact on local communities	Contractors need to employ people from the immediate area whenever possible. A Social Engagement Plan, formal monitoring systems and contingency plans for larger-than-expected in-migration should be prepared and implemented to assist with the management of jobseekers and so-called community business forums.
Increase in local crime	Co-operation between the Developer and contractors is essential to ensure that the area around the proposed development remains secured during construction. On-site security measures, such as perimeter fencing, controlled access and security guards and patrols would minimise the risk.
Operational phase	
Sense of place, residential property values	Implement recommendations by relevant specialists to mitigate negative visual, traffic, noise and air pollution impacts. All these impacts affect the socio-economic fabric of the area surrounding the CWA and along the flight path.
Local crime	Co-operation between Developers and contractors and on-site security measures.
Informal settlements	Formal housing could address the area's housing needs, eliminating the need for informal structures. Private landowners should ensure that the authorities deal with unauthorised land settlements.

Nearby farming and business operations	Refer to mitigating measures that relevant specialists proposed (in particular agro-ecosystem, noise and air pollution).
Bulk infrastructure requirements	Implement recommendations from engineering reports.

Impact statement

The most significant socio-economic benefit from the proposed CWA project is the anticipated contribution to the aviation industry in the Western Cape. In terms of **economic benefits**, an estimated R8,9 billion in capital investment could generate R23,1 billion in new business sales, which could add R8,8 billion (net of the import leakage) to the GGP of the Western Cape economy during construction. During an initial 20-year operational period, which includes a substantial component of maintenance expenditure, an estimated R36,1 billion in nominal terms could generate R76,1 billion in new business sales.

The project could sustain about 32 433 (direct, indirect, and induced) **employment opportunities** during construction, including ongoing capital expenditure upgrades over 20 years. This could increase household incomes by R3,8 billion over 22 years. During the initial 20 years of operations, the project could sustain about 102 732 direct, indirect, and induced employment opportunities, adding R17,7 billion in household income.

Several potential **negative impacts** were identified, including traffic flows, sense of place, impact on property values, nuisance factors, local crime, influx of job seekers, risk of informal settlements (due to expanding economic activity in the area) where construction workers could impact local communities). However, if the CWA is properly managed and the mitigation measures indicated by the various specialists are implemented, the significance of these impacts would be low to moderate.

Our analysis indicates that the benefits would outweigh the potential socio-economic costs of the proposed CWA expansion. The proposed development and operation of the CWA at the proposed location do not indicate any fatal flaws, provided that all regulatory standards and permit requirements issued to operate airport facilities are adhered to.

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ANNEXURE A: CRITERIA FOR SPECIALIST ASSESSMENT OF IMPACTS

These criteria are drawn from the EIA Regulations published by the Department of Environmental Affairs and Tourism (April 1998) in terms of the Environment Conservation Act, 1989 (Act No. 73 of 1989) and include:

- Nature of the impact: This is an appraisal of the type of effect the construction, operation, and maintenance of a development would have on the affected environment. This description should include what is to be affected and how.
- Extent of the impact: The specialist should describe whether the impact will be local (extending only as far as the development site area) or limited to the site and its immediate surroundings; or will have an impact on the region; or will have an impact on a national scale or across international borders.
- Duration of the impact: The specialist should indicate whether the lifespan of the impact would be short term (0-5 years), medium term (5-15 years), long term (16-30 years) or permanent.
- Intensity: The specialist should establish whether the impact is destructive or benign and should be qualified as low, medium, or high. The specialist study must attempt to quantify the intensity of the impacts and outline the rationale used.
- Probability of occurrence: The specialist should describe the probability of the impact actually occurring and should be described as improbable (low likelihood), probable (distinct possibility), highly probable (most likely) or definite (impact will occur regardless of any prevention measures).

The impacts should also be assessed in terms of the following aspects:

- Legal requirements: The specialist should identify and list the relevant South African legislation and permit requirements pertaining to the development proposals. He / she should provide reference to the procedures required to obtain permits and describe whether the development proposals contravene the applicable legislation.
- Status of the impact: The specialist should determine whether the impacts are negative, positive, or neutral ("cost –benefit" analysis). The impacts are to be assessed in terms of their effect on the project and the environment. For example, an impact that is positive for the proposed development may be negative for the environment. It is important that this distinction is made in the analysis.
- Cumulative impact: Consideration must be given to the extent of any cumulative impact that may occur due to the proposed development. Such impacts must be evaluated with an assessment of similar developments already in the environment. Such impacts will be either positive or negative, and will be graded as being of negligible, low, medium, or high impact.
- Degree of confidence in predictions: The specialist should state what degree of confidence (low, medium, or high) exists in the predictions based on the available information and level of knowledge and expertise.

Based on a synthesis of the information contained in the above-described procedure, the specialist is required to assess the potential impacts in terms of the following significance criteria:

- No significance: the impacts do not influence the proposed development and/or environment in any way.
- Low significance: the impacts will have a minor influence on the proposed development and/or environment. These impacts require some attention to modification of the project design where possible, or alternative mitigation.
- Moderate significance: the impacts will have a moderate influence on the proposed development and/or environment. The impact can be ameliorated by a modification in the project design or implementation of effective mitigation measures.
- High significance: the impacts will have the "No-Go" implication on the development or portions of the development regardless of any mitigation measures that could be implemented. This level of significance must be well motivated.

The EIA process is based on assessment of future impacts and consequences, therefor there is still possibility of uncertainties and unknown areas even though the scientific basis of the specialist studies is sound. Where unknowns and uncertainties exist, it should be indicated, and a conservative approach should be followed when assessing and determining the level of significance.

Criteria for evaluation of impacts

CRITERIA	CATEGORY	DESCRIPTION
EXTENT or Spatial influence of impact	**Regional (R)**	Beyond 5 km of the proposed development
	Local (L)	Within 5 km of the proposed development
	Site-specific (SS)	On site or within 100 m of the site boundary.
MAGNITUDE of NEGATIVE IMPACT (at the indicated spatial scale)	**High (H)**	Bio-physical and/ or social functions and/ or processes are *severely* altered.
	Medium (M)	Bio-physical and/ or social functions and/ or processes are *notably* altered.
	Low (L)	Bio-physical and/ or social functions and/ or processes are *slightly* altered.
	Very Low (VL)	Bio-physical and/ or social functions and/ or processes are *negligibly* altered
	Zero (Z)	Bio-physical and/ or social functions and/ or processes remain *unaltered.*
MAGNITUDE of POSITIVE IMPACT (at the indicated spatial scale)	**High (H)**	Bio-physical and/ or social functions and/ or processes are *vastly* enhanced.
	Medium (M)	Bio-physical and/ or social functions and/ or processes are *notably* enhanced.
	Low (L)	Bio-physical and/ or social functions and/ or processes are *slightly* enhanced.
	Very Low (VL)	Bio-physical and/ or social functions and/ or processes are *negligibly* enhanced.
	Zero (Z)	Bio-physical and/ or social functions and/ or processes remain *unaltered.*
DURATION of impact	**Short Term (S)**	0-5 years (after construction).
	Medium Term (M)	5-15 years (after construction).
	Long Term (L)	More than 15 years (after construction).
PROBABILITY of occurrence	**Definite (D)**	>95% chance of the potential impact occurring.
	Probable (Pr)	20% - 95% chance of the potential impact occurring
	Possible (Po)	5% - 20% chance of the potential impact occurring
	Improbable (Im)	<5% chance of the potential impact occurring.
CONFIDENCE level	**Certain (C)**	More than adequate amount of information and understanding of the bio-physical and/ or social functions and/ or processes that may potentially influence the impact.
	Sure (S)	Reasonable amount of information and understanding of the biophysical and/ or social functions and/ or processes that may potentially influence the impact.
	Unsure (U)	Limited amount of information and understanding of the bio-physical and/ or social function

Definition of significance ratings

SIGNIFICANCE RATINGS	LEVEL OF CRITERIA REQUIRED
High (H)	- High intensity with a regional extent and long-term duration - High intensity with either a regional extent and medium-term duration or a local extent and long-term duration - Medium intensity with a regional extent and long-term duration.
Medium (M)	- High intensity with a local extent and medium-term duration - High intensity with a regional extent and short-term duration or a site-specific extent and long-term duration - High intensity with either a local extent and short-term duration or a site-specific extent and medium-term duration - Medium intensity with any combination of extent and duration except site specific and short term or regional and long term - Low intensity with a regional extent and long-term duration.
Low (L)	- High intensity with a site-specific extent and short-term duration - Medium intensity with a site-specific extent and short-term duration - Low intensity with any combination of extent and duration except site specific and short term - Very low intensity with a regional extent and long-term duration.
Very low (VL)	- Low intensity with a site-specific extent and short-term duration - Very low intensity with any combination of extent and duration except regional and long term.
Neutral (N)	Zero intensity with any combination of extent and duration

ANNEXURE B: IMPACT ASSESSMENT OUTCOMES

PROJECT ALTERNATIVE	NATURE OF IMPACT	BEFORE MITIGATION								AFTER MITIGATION								PROPOSED MITIGATION
		Extent	Magnitude	Duration	Probability	Confidnece	Significance	Status	Cumulative	Extent	Magnitude	Duration	Probability	Confidnece	Significance	Status	Cumulative	
CONSTRUCTION PHASE																		
Nuisance factors (dust and noise)																		
Alternative 1	Construction activities create dust and noise at the development site that would affect nearby receptors	SS	L	S	D	C	VL	-	L	SS	VL	S	D	C	VL	-	L	Dust and noise emissions during the construction period should be minimised through a Construction Environmental Management Plan (CEMP).
Alternative 2		SS	H	S	D	C	L	-	M	SS	M	S	D	C	L	-	M	
Alternative 3 & 4		SS	H	S	D	C	L	-	M	SS	M	S	D	C	L	-	M	
Influx of job seekers																		
Alternative 1	An influx of job-seekers may lead to competition with local residents for employment opportunities	L	L	S	D	C	L	-	L	L	VL	S	D	C	L	-	L	Contractors need to employ people from the immediate area whenever possible. A Social Engagement Plan, formal monitoring systems and contingency plans for larger-than-expected in-migration should be prepared and implemented to assist with the management of jobseekers and so-called community business forums.
Alternative 2		L	H	S	D	C	M	-	M	L	M	S	D	C	M	-	H	
Alternative 3 & 4		L	H	S	D	C	M	-	M	L	M	S	D	C	M	-	H	
Impact of construction workers on local communities																		
Alternative 1	Incoming construction workers can disrupt family structures and social networks in local communities	L	L	S	D	C	VL	-	L	L	VL	S	D	C	VL	-	L	Contractors need to employ people from the immediate area whenever possible. A Social Engagement Plan, formal monitoring systems and contingency plans for larger-than-expected in-migration should be prepared and implemented to assist with the management of jobseekers and so-called community business forums.
Alternative 2		L	H	S	D	C	L	-	M	L	M	S	D	C	L	-	M	
Alternative 3 & 4		L	H	S	D	C	L	-	M	L	M	S	D	C	L	-	M	
Local crime																		
Alternative 1	Construction activities and workers may increase criminal activities in the surrounding area	L	L	S	D	C	VL	-	L	L	VL	S	D	C	VL	-	L	Co-operation between the Developer and contractors is essential to ensure that the area around the proposed development remains secured during construction. On-site security measures would minimise the risk.
Alternative 2		L	H	S	D	C	L	-	M	L	M	S	D	C	L	-	M	
Alternative 3 & 4		L	H	S	D	C	L	-	M	L	M	S	D	C	L	-	M	
Contribution towards local economic income and temporary employment opportunities																		
Alternative 1	Local economies would benefit from procurement of goods and services, spending wages and salaries, and temporary employment	R	L	S	D	C	L	+	M									No mitigation applies as it represents a positive impact. However, the Developer should be cognisant of the importance of using local labour as far as possible.
Alternative 2		R	H	M	D	C	H	+	H									
Alternative 3 & 4		R	H	M	D	C	H	+	H									

PROJECT ALTERNATIVE	NATURE OF IMPACT	BEFORE MITIGATION								AFTER MITIGATION								PROPOSED MITIGATION
		Extent	Magnitude	Duration	Probability	Confidnece	Significance	Status	Cumulative	Extent	Magnitude	Duration	Probability	Confidnece	Significance	Status	Cumulative	
OEPRATIONAL PHASE																		
Transport infrastructure																		
Alternative 1	The CWA expansion would address a growing demand for transport infrastructure in the COCT	R	L	L	D	C	L	+	L									No mitigation applies as it represents a positive impact.
Alternative 2		R	H	L	D	C	H	+	H									
Alternative 3 & 4		R	H	L	D	C	H	+	H									
Sense of Place																		
Alternative 1	The proposed CWA expansion would impact the sense of place for surrounding land users	L	L	L	D	C	L	-	M	L	VL	L	D	C	VL	-	L	Implement recommendations by relevant specialists to mitigate negative visual, traffic, noise and air pollution impacts. All these impacts affect the socio-economic fabric of the area surrounding the CWA and along the
Alternative 2		L	H	L	D	C	H	-	H	L	M	L	D	C	M	-	H	
Alternative 3 & 4		L	H	L	D	C	H	-	H	L	M	L	D	C	M	-	H	
Local crime																		
Alternative 1	Transport and commercial activities may contribute to an increase in local crime	L	VL	L	Pr	S	VL	-	L	L	VL	L	Pr	S	VL	-	L	Co-operation between Developers and contractors and on-site security measures.
Alternative 2		L	M	L	Pr	S	M	-	H	L	L	L	Pr	S	L	-	M	
Alternative 3 & 4		L	M	L	Pr	S	M	-	H	L	L	L	Pr	S	L	-	M	
Risk of informal settlements																		
Alternative 1	Large developments may attract job seekers who settle on nearby vacant land in anticipation of employment	L	VL	L	Pr	S	VL	-	L	L	VL	L	Pr	S	VL	-	L	Formal housing could address the area's housing needs, eliminating the need for informal structures. Private landowners should ensure that the authorities deal with unauthorised land settlements.
Alternative 2		L	M	L	Pr	S	M	-	H	L	L	L	Pr	S	L	-	M	
Alternative 3 & 4		L	M	L	Pr	S	M	-	H	L	L	L	Pr	S	L	-	M	
Impact on nearby farming and business operations																		
Alternative 1	A large airport may impact current and future farming and business operations in the area	L	VL	L	Pr	S	VL	-	L	L	VL	L	Pr	S	VL	-	L	Refer to mitigating measures that relevant specialists proposed (in particular agro-ecosystem, noise and air pollution).
Alternative 2		L	M	L	Pr	S	M	-	H	L	L	L	Pr	S	L	-	M	
Alternative 3 & 4		L	M	L	Pr	S	M	-	H	L	L	L	Pr	S	L	-	M	
Surrounding property values - residential																		
Alternative 1	A new development may affect the current and future perceived value of properties in the surrounding area	L	L	L	Pr	S	L	-	L	L	VL	L	Pr	S	VL	-	L	Implement recommendations by relevant specialists to mitigate negative visual, traffic, noise and air pollution impacts. All these impacts affect the socio-economic fabric of the area surrounding the CWA and along the
Alternative 2		L	H	L	Pr	S	H	-	H	L	M	L	Pr	S	M	-	M	
Alternative 3 & 4		L	H	L	Pr	S	H	-	H	L	M	L	Pr	S	M	-	M	

PROJECT ALTERNATIVE	NATURE OF IMPACT	BEFORE MITIGATION								AFTER MITIGATION								PROPOSED MITIGATION
		Extent	Magnitude	Duration	Probability	Confidnece	Significance	Status	Cumulative	Extent	Magnitude	Duration	Probability	Confidnece	Significance	Status	Cumulative	
OEPRATIONAL PHASE																		
Surrounding property values - commercial/agricultural																		
Alternative 1	A new development may affect the current and future perceived value of properties in the surrounding area	L	VL	L	Pr	S	VL	+	L									No mitigation applies as it represents a positive impact.
Alternative 2		L	L	L	Pr	S	L	+	M									
Alternative 3 & 4		L	L	L	Pr	S	L	+	M									
Bulk infrastructure requirements																		
Alternative 1	Bulk infrastructure services are to be supplied by the Developer, but require sufficient local capacity.	L	L	L	D	C	L	-	L	L	VL	L	D	C	VL	-	L	Implement recommendations from engineering reports.
Alternative 2		L	H	L	D	C	H	-	H	L	L	L	D	C	L	-	M	
Alternative 3 & 4		L	H	L	D	C	H	-	H	L	L	L	D	C	L	-	M	
Local business opportunities																		
Alternative 1	The CWA expansion would create opportunities for small businesses in the goods and services sectors	R	VL	L	D	C	VL	+	L									No mitigation applies as it represents a positive impact.
Alternative 2		R	H	L	D	C	H	+	H									
Alternative 3 & 4		R	H	L	D	C	H	+	H									
Economic income and new employment opportunities																		
Alternative 1	Procuring goods and services, creating new employment opportunities, and spending wages and salaries would benefit local economies	R	VL	L	D	C	VL	+	L									No mitigation applies as it represents a positive impact.
Alternative 2		R	H	L	D	C	H	+	H									
Alternative 3 & 4		R	H	L	D	C	H	+	H									
Revenue accruing to local authorities																		
Alternative 1	Monetary benefits accrue to the COCT through property rates and other utility charges such as water and electricity	R	VL	L	D	C	VL	+	L									No mitigation applies as it represents a positive impact.
Alternative 2		R	H	L	D	C	H	+	H									
Alternative 3 & 4		R	H	L	D	C	H	+	H									

ANNEXURE C: APPENDIX 6 CHECKLIST

Compliance with Appendix 6 of the National Environmental Management Act (NEMA) Environmental Impact Assessment (EIA) Regulations, 2014

Requirements of Appendix 6 of the 2014 EIA Regulations	Included in the report in:
(1) A specialist report prepared in terms of these Regulations must contain-(a) details of- (i) the specialist who prepared the report; and (ii) the expertise of that specialist to compile a specialist report including a *curriculum vitae*;	Section 1.1, Annexure D
(b) a declaration that the specialist is independent in a form as may be specified by the competent authority;	Annexure C
(c) an indication of the scope of, and the purpose for which the report was prepared;	Section 1
(cA) an indication of the quality and age of base data used for the specialist report;	Section 1.5
(cB) a description of existing impacts on the site, cumulative impacts of the proposed development and levels of acceptable change;	Section 2
(d) the duration, date and season of the site investigation and the relevance of the season to the outcome of the assessment;	19 Feb 2022
(e) a description of the methodology adopted in preparing the report or carrying out the specialised process inclusive of equipment and modelling used;	Section 1.3
(f) details of an assessment of the specific identified sensitivity of the site related to the proposed activity or activities and its associated structures and infrastructure, inclusive of a site plan identifying site alternatives;	Section 2
(g) an identification of any areas to be avoided, including buffers;	Not applicable
(h) a map superimposing the activity including the associated structures and infrastructure on the environmental sensitivities of the site including areas to be avoided, including buffers;	Section 2
(i) a description of any assumptions made and any uncertainties or gaps in knowledge;	Section 1.4 & 1.5
(j) a description of the findings and potential implications of such findings on the impact of the proposed activity or activities;	Section 6
(k) any mitigation measures for inclusion in the EMPr;	Section 6
(l) any conditions for inclusion in the environmental authorisation;	Section 8
(m) any monitoring requirements for inclusion in the EMPr or environmental authorisation;	Sections 7 & 8
n) a reasoned opinion- (i) whether the proposed activity or portions thereof should be authorised; and (iA) regarding the acceptability of the proposed activity or activities; and (ii) if the opinion is that the proposed activity, activities or portions thereof should be authorised, any avoidance, management and mitigation measures that should be included in the EMPr, and where applicable, the closure plan;	Section 8
(o) a description of any consultation process that was undertaken during the course of preparing the specialist report;	Section 1.3
(p) a summary and copies of any comments received during any consultation process and where applicable all responses thereto; and	Responses to comments provided as part of the EIA process; included in Comments and Response table prepared by EAP
(q) any other information requested by the competent authority.	Not applicable
(2) Where a government notice gazetted by the Minister provides for any proposal or minimum information requirement to be applied to a specialist reports, the requirements as indicated in such notice will apply.	Report prepared in accordance with Economic and Social Specialist input Guidelines issued by Department of Environmental Affairs and Development Planning.

ANNEXURE D: DECLARATION OF INDEPENDENCE

forestry, fisheries & the environment
Department:
Forestry, Fisheries and the Environment
REPUBLIC OF SOUTH AFRICA

Private Bag X447, Pretoria, 0001, Environment House, 473 Steve Biko Road, Pretoria, 0002 Tel: +27 12 399 9000, Fax: +27 86 625 1042

SPECIALIST DECLARATION FORM – AUGUST 2023

Specialist Declaration form for assessments undertaken for application for authorisation 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)

REPORT TITLE

Socio-Economic Impact Assessment for the proposed Cape Winelands Airport, Fisantekraal

Kindly note the following:

1. This form must always be used for assessment that are in support of applications that must be subjected to Basic Assessment or Scoping & Environmental Impact Reporting, where this Department is the Competent Authority.
2. This form is current as of August 2023. It is the responsibility of the Applicant / Environmental Assessment Practitioner (EAP) to ascertain whether subsequent versions of the form have been published or produced by the Competent Authority. The latest available Departmental templates are available at https://www.dffe.gov.za/documents/forms.
3. An electronic copy of the signed declaration form must be appended to all Draft and Final Reports submitted to the department for consideration.
4. The specialist must be aware of and comply with '*the Procedures for the assessment and minimum criteria for reporting on identified environmental themes in terms of sections 24(5)(a) and (h) and 44 of the act, when applying for environmental authorisation - GN 320/2020)'*, where applicable.

1. SPECIALIST INFORMATION

Title of Specialist Assessment	Socio-Economic Baseline Report
Specialist Company Name	Multi-Purpose Business Solutions CC
Specialist Name	Dr Jonathan Zorah Bloom
Specialist Identity Number	6706265061081
Specialist Qualifications:	BCom, HonsBCom, MCom, PhD
Professional affiliation/registration:	Not applicable
Physical address:	1479 Milano Place, Val de Vie Estate, Paarl
Postal address:	1479 Val de Vie Estate, Paarl, 7646
Telephone	021-8800774
Cell phone	083 299 8523
E-mail	jzbloom@mweb.co.za

2. DECLARATION BY THE SPECIALIST

I, **Jonathan Zorah Bloom**, declare that –

- I act as the independent specialist in this application;
- I am aware of the procedures and requirements for the assessment and minimum criteria for reporting on identified environmental themes in terms of sections 24(5)(a) and (h) and 44 of the National Environmental Management Act (NEMA), 1998, as amended, when applying for environmental authorisation which were promulgated in Government Notice No. 320 of 20 March 2020 (i.e. "the Protocols") and in Government Notice No. 1150 of 30 October 2020.
- I will perform the work relating to the application in an objective manner, even if this results in views and findings that are not favourable to the applicant;
- I declare that there are no circumstances that may compromise my objectivity in performing such work;
- I have expertise in conducting the specialist report relevant to this application, including knowledge of the Act, Regulations and any guidelines that have relevance to the proposed activity;
- I will comply with the Act, Regulations and all other applicable legislation;
- I have no, and will not engage in, conflicting interests in the undertaking of the activity;
- I undertake to disclose to the applicant and the competent authority all material information in my possession that reasonably has or may have the potential of influencing –
    - any decision to be taken with respect to the application by the competent authority; and;
    - the objectivity of any report, plan or document to be prepared by myself for submission to the competent authority;
- All the particulars furnished by me in this form are true and correct; and
- I realise that a false declaration is an offence in terms of Regulation 48 and is punishable in terms of section 24F of the NEMA Act.

Signature of the Specialist

Multi-Purpose Business Solutions cc

Name of Company

11 March 2025

Date

ANNEXURE E: ABBREVIATED CURRICULUM VITAE OF SPECIALIST

DR. JONATHAN ZORAH BLOOM

ID NUMBER: 670626 5061 081

CURRENT STATUS: Managing Member, Multi-Purpose Business Solutions cc

NATIONALITY: South African Citizen

DATE OF BIRTH: 26 June 1967

LINGUISTIC ABILITIES: Proficient in English and Afrikaans

ADDRESS (Office): 1479 Milano Place, Val de Vie Estate, Paarl, 7646
Telephone: +27-21-880 0774
Mobile: +27-83-299 8523
E-mail: jbloom@mpbs.co.za

EDUCATION AND QUALIFICATIONS

1985: Matriculation at Paarl Boys' High School, Paarl
1989: BComm, Stellenbosch University
1990: HonsBComm (*cum laude*), Stellenbosch University
1992: MComm (*cum laude*), Stellenbosch University
2001: PhD (Corporate Finance), Stellenbosch University

EMPLOYMENT HISTORY

1995 to present: Managing Member of Multi-Purpose Business Solutions, a niche business advisory and economic development consulting firm with a specific focus on the public and government sector.

1 January 2008 to 31 July 2013: Part-time Professor of Corporate Finance, specialising in Real Estate Investment and Financing, Stellenbosch University.

2003 to April 2019: Director of Blue Cube Systems (Pty) Ltd and Blue Cube Intellectual Property Company (Pty) Ltd, private sector companies in the ICT industry.

1 July 2001 to 31 December 2007: Professor of Corporate Financial Management, specialising in Real Estate Investment and Financing, Stellenbosch University, with a special interest in business development.

1 July 2000 to 30 June 2001: Executive Manager of Chartered Alliance (Pty) Ltd, with assigned responsibility for the Business Services Unit within the Lateral Corporate Finance division of Chartered Alliance.

1 July 1999 to 30 June 2000: Executive Director of Crusader Systems (Pty) Ltd, charged with establishing a presence for the Business Solutions Group in the financial services industry.

1 January 1991 to 30 June 1999: Lecturer in the Department of Business Management, Stellenbosch University.

RESEARCH AWARDS

- Y-rating from the National Research Foundation (NRF) (2003).
- Rector's award for Excellence in Research (2003), Stellenbosch University.

BUSINESS AND ADVISORY EXPERTISE

- Public transport (IPTN) business development and implementation
- Project Management
- Public-Private-Partnership facilitation and procurement
- Commercialisation Initiatives
- Real Estate Development Services
- Financial Appraisals and Feasibility Studies
- Social and Economic Impact Assessments
- Customer Surveys
- Local Economic Development Planning with project development focus

SELECTION OF PROJECT INVOLVEMENTS RELATED TO SOCIO-ECONOMIC IMPACT ANALYSES

- Socio-Economic Baseline Report for the proposed 150 MW LPG Fueled Power Generating Facility, Saldanha Bay, for Legacy Environmental Management Consulting.
- Socio-Economic Baseline Report for the proposed 100 MW LPG Fueled Power Generating Facility, Saldanha Bay, for Legacy Environmental Management Consulting.
- Socio-Economic Impact Assessment for the proposed 1000 MW Liquified Natural Gas (LNG) to Power Plant; LNG Storage and Regassification Facility, Overhead Electricity Transmission Line, and Associated Infrastructure across various Farm Portions, Saldanha, Western Cape, for Legacy Environmental Management Consulting.
- Socio-Economic Impact Assessment for the proposed Sterrekus Solar Energy Facility & Overhead Power Lines, Blaauwberg, for Legacy Environmental Management Consulting.
- Socio-Economic Impact Assessment for the proposed Mixed Township Development on Portion 1, 8 and 21 of Grootfontein Farm No. 394IR in the City of Tshwane, for GKM Environmental.
- Socio-Economic Impact Assessment for the proposed Carletonville Solar Photovoltaic Plant on Farm 105 Twyfelvlakte, Merafong City, Gauteng, for Legacy Environmental Management Consulting.
- Socio-economic Impact Assessment for the proposed Carpe Diem South Solar Photovoltaic Plant on Farm Doornfontein 118/27, Merafong City, for Legacy Environmental Management Consulting.
- Socio-economic Impact Assessment for the proposed Carpe Diem North Solar Photovoltaic Plant on Farm Varkenslaagte 119/5, Merafong City, for Legacy Environmental Management Consulting.
- Socio-Economic Baseline Report for the proposed 50 MW Eland Solar PV Plant and associated Overhead Line, eMakhazeni Municipality, for Legacy Environmental Management Consulting.
- Socio-Economic Impact Assessment for the proposed Klipheuwel Organic Waste Beneficiation and Biogas Facility on Farm Corona RE/480, Paarl, for Resource Management Services.
- Socio-Economic Impact Assessment for the proposed Ebenezer Multi-Purpose Centre and Sports Fields, on a Portion of Farm 727/22, Warburgh Road, Joostenbergvlakte, for Legacy Environmental Management Consulting.
- Socio-economic Impact Assessment for the proposed Cape Winelands Airport, Fisantekraal, for Capital Expenditure Projects (Pty) Ltd.
- Socio-economic Impact Assessment for the proposed Bellpark Mixed-use development, Bellville, for Legacy Environmental Management Consulting.
- Socio-economic Impact Assessment for the proposed Gydo Renewable Energy Project, Witzenberg Municipality, for SPV Renfields.
- Economic Scoping Assessment for the proposed Wesco Waste Management Facility (WMF) on the Farm Brakkefontein 32, Cape Town, for SLR Consulting (South Africa) (Pty) Ltd.

- Socio-economic Impact Assessment for the proposed Western Cape Wind Energy Facility, located in the Overberg REDZ, Western Cape Province, for Terramanzi Group.
- Socio-Economic Impact Assessment for the Klipfontein Solar Farm in the West Coast District for Resource Management Services.
- Socio-Economic Impact Assessment for the Stellenbosch Bridge development in Klapmuts, Stellenbosch, for Stellenbosch Bridge Properties (Pty) Ltd.
- Socio-Economic Impact Assessment for the proposed Lucullus Gardens Development, Joostenbergvlakte for Urban Land Joostenbergvlak (Pty) Ltd.
- Socio-economic Impact Statement for the additional housing on the Uitgezocht development in Paarl. Terramanzi Group commissioned the project.
- Benefit-Cost Value Assessment and socio-economic implications associated with the Picardi Residential Development, Paarl, for Arun Projects (Pty) Ltd.
- Socio-Economic Impact Assessment for the Darwin Road housing development, Joostenbergvlakte, for Lukhozi Consulting Engineers.
- Socio-Economic Impact Assessment for the Longlands Manor development in Vlottenburg, Stellenbosch for Legacy Environmental Consulting.
- Socio-Economic Impact Assessment for the proposed expansion of the Afro Fishing facility in the Port of Mossel Bay for Afro Fishing (Pty) Ltd.
- Financial viability, cost-benefit and market analysis for a proposed Mediclinic in the George Area. The assignment adopted a strategic approach to packaging a project that had transport-related issues, location considerations and required spatial alignment (2018-2019).
- Economic impact assessment and financial modelling for the development of Waterfront in the Port of Mossel Bay for Transnet National Ports Authority (TNPA)
- Socio-Economic Impact Assessment for Substantive Amendment Application for the Levendal Development in Southern Paarl for Val de Vie Investments (Pty) Ltd.
- Socio-Economic Impact Assessment for the River Farm development in Paarl for Val de Vie Developments (Pty) Ltd.
- Socio-Economic Impact Statement for the proposed Paarl Valleij Estate in Northern Paarl for Paarl Valleij Developments (Pty) Ltd.
- Socio-Economic Impact Assessment for the proposed Gourits Abalone Farm, in association with PHS Consulting.
- Socio-economic Impact Assessment for the proposed Vlottenburg Village development on Vredenheim Farm, Stellenbosch, in association with Withers Environmental Consultants.
- Economic and financial analysis, strategy formulation input for the preparation of an Urban Development Strategy for Stellenbosch Municipal area. The assignment entailed the development of a value surplus or deficit model to assess the impact of development decisions on the socio-economic fabric of the Stellenbosch economy, communities and the Municipality from an infrastructure and operational income and expense perspective. Rode and Associates commissioned the assignment.
- The development and application of a value assessment model for the Klapmuts Special Development Area (SDA) (Stellenbosch Municipality) to assess the investment, economic and funds flow impact for a development scenario. Assignment also included a property valuation analysis and the preparation of a community investment structure supported by a SPV. Beal Africa commissioned the assignment.
- Financial Economic analysis and preparation of an Investment Decision-making Platform as an input for the George Settlement Restructuring Strategy. RoyalHaskoning DHV commissioned the assignment.
- Socio-economic impact assessment for the development of a proposed Tungsten Mining Project in Piketberg in terms of the NEMA regulations and Mineral Petroleum and Resources Act.
- Socio-Economic Impact Assessment for the Mamre Wind Energy Facility in the City of Cape Town Metropolitan Area for Mulilo Mamre Wind Energy (Pty) Ltd.

- Social and Labour Plan for the application of a Mining Right for a proposed Tungsten Project in Piketberg in terms of the Mineral Petroleum and Resources Act.
- Economic impact assessment of the construction phase for the redevelopment of the Somerset Precinct in the Cape Town area for Department of Public Works, Western Cape in association with Rode and Associates.
- Socio-economic impact assessment for the development of two mariculture sites off the coast of the Eastern Cape for the Department of Environmental Affairs and Development Planning in association with Cape Environmental Practitioners, George.
- Economic Impact Assessment and Social Impact Assessment for the Parklands development in Saldanha Bay on the West Coast for Parklands Township Developers (Pty) Ltd.
- Socio-Economic Impact Assessment for development on a portion of the farm Constantia Uitsig and expansion of the tourism and hospitality facilities on the Farm.
- Socio-Economic Impact Assessment for the development of a residential estate in Melkbosstrand, Cape Town, for Nuplan Africa.
- Economic Impact Assessment and Social Impact Assessment with a social development focus for the Bella Riva development in the Durbanville region of the Cape Town Metropolitan Area of the Western Cape.
- Socio-Economic Impact Assessment for the development of two Wind Energy Facilities (Goereesoe and Kluitjieskraal) near Swellendam for Inca Energy (Pty) Ltd.
- Socio-Economic Impact Assessment for the proposed development of the Clover Wind and Solar Energy facility near Darling, Swartland Municipal area.
- Socio-Economic Impact Assessment for the proposed development of the Storm Photovoltaic Plant, Saldanha Bay, for Midnight Storm Investments 184 (Pty) Ltd.
- Socio-Economic Impact Assessment for the proposed development of Organic Recycling Processing Facility on Portion 2 of the Farm Olyphantsfontein No. 935, Malmesbury, for Soil and More Reliance.
- Socio-Economic Impact Assessment for the proposed development of the Dysselsdorp RE-Power PV Plant, near Oudtshoorn, Western Cape, for Dysselsdorp RE-Power (Pty) Ltd.
- Socio-Economic Baseline Assessment for the proposed Schaap Kraal Philippi Horticultural Area (PHA), Cape Town, for MSP Developments (Pty) Ltd.
- Social Impact Assessment with a social development focus for the Bosbokkamp Residential development in Stilbaai, Western Cape for Asla Devco (Pty) Ltd.
- Economic Impact Assessment and Social Impact Assessment for an upmarket residential estate in Paarl for Rhebokskloof Properties (Pty) Ltd.
- Socio-Economic Assessment for the proposed development of a sports facility for the Paarl Boys' High School. The School commissioned the assignment.
- Socio-economic Impact Assessment for the proposed Hoek van de Berg Marine and Coastal Reserve, Overstrand, for Saddle Path Properties 79 (Pty) Ltd.
- Socio-Economic Impact Assessment for the establishment of a Regional landfill site in the Worcester area, Western Cape Province, for Jan Palm Consulting Engineers.
- Socio-Economic Impact Assessment for a mixed-use development on the Vredenheim Farm in Stellenbosch for Withers Environmental Consultants (ongoing).
- Socio-Economic Impact Assessment for the establishment of an Organic Recycling Facility on Farm Corona No. 480, Paarl, Western Cape, for Resource Management Services.
- Socio-Economic Impact Assessment for the establishment of the Frankendale Industrial Park north of Cape Town for Kohler Bricks (Pty) Ltd.
- Socio-Economic Impact Assessment for the development of a mixed-use development around the Brandwag Dam in Worcester, Western Cape for Tresso Trading 915 (Pty) Ltd (ongoing).

- Economic impact assessment for the development of a Sun International Resort on Retosa Island, Singapore. The assignment was commissioned jointly by International Real Estate Appraisals and Sun International South Africa.
- Economic impact assessment for the development of a themed attraction in the Ezulwini Valley, Swaziland, for KPMG (SA).
- Socio-economic impact analysis of hotel developments on the local and regional communities in the Helderberg Basin, Western Cape, for Quaypower Properties Plc, United Kingdom.
- Socio-economic impact assessment for the development of an Africa Theme Park and Resort in Gauteng for Stewart Scott International in association with KPMG (SA).
- Economic impact assessment for the development of the Salama Waterfront in Dar es Salaam, Tanzania, for Atos-KPMG and International Real Estate Appraisals.
- Economic Impact Assessment and Social Impact Assessment for the establishment of Waverenskroon Country Estate in Tulbagh for L'eritage Nouveau Development Company (Pty) Ltd.
- Economic Impact Assessment and Social Impact Assessment for the establishment of Dalskroon Retirement Village in Tulbagh for Midnight Masquerade 267 (Pty) Ltd.
- Economic Impact Assessment for the establishment of residential development at Doringbaai for Doringbaai Hoogtes Eiendomsbelegging (Edms) Bpk.
- Economic Impact Statement for the establishment of an Apartment Complex at Hawston near Hermanus in the Overstrand region of the Western Cape for Portland Eiendoms Ontwikkeling (Edms) Bpk.
- Economic Impact Assessment and Social Impact Assessment for the establishment of the Salmonsvlei-Wes Residential estate in Paarl for Keynote Trading and Investments 50 (Pty) Ltd.
- Economic Impact Assessment and Social Impact Assessment for the development of the proposed Middelberg Eco- and Country Estate in Stanford, Overstrand for the Wright Approach Consultancy of Hermanus.
- Economic Impact Assessment and Social Impact Assessment for the development of the Compagnes Drift Residential Estate in Botrivier, Theewaterskloof, for the Wright Approach Consultancy.
- Economic Impact Assessment and Social Impact Assessment for the development of a hotel and apartment complex at Gansbaai (Danger Point) in the Overstrand region of the Western Cape for Great White Limited, a UK-based development firm.
- Economic Impact Assessment and Social Impact Assessment for the multi-million Rand Destiny Africa development in George, Southern Cape, for Kuriakos Design & Management Consultancy.
- Economic Impact Assessment and Social Impact Assessment for the Groenfontein mixed-use Development in Klapmuts, Stellenbosch, for Frantius Property Investments (Pty) Ltd.
- An economic impact assessment with a social development focus for a mix of components comprising agriculture estate units, a lodge with conference facility, a farm stall, wine cellar and restaurant known as the Stellenbosch Wine and Country Estate in the Stellenbosch area. Stellenbosch Wine and Country (Pty) Ltd commissioned the study.
- Economic impact assessment for residential development, boutique lodge and retail village in the Sundays River area of the Eastern Cape for Premier Residential Development (Pty) Ltd.
- Economic impact assessment for the Statue of Freedom multi-purpose development in Nelson Mandela Bay Metropolitan Municipality for the Nelson Mandela Metropolitan Municipality in association with Atos-KPMG.
- Socio-Economic Impact Assessment for a lifestyle resort in the Somerset East area of the Eastern Cape Midlands for the Blue Crane Development Agency.
- Socio-Economic Impact Assessment for the development of a golf estate and hotel (primary application) at Stellenbosch for Paradyskloof Golf Estates (Pty) Ltd. The assignment entails the evaluation of a primary application and two alternatives, one being agriculture (vineyards and olive orchards).
- Socio-Economic Impact Assessment for the development of a golf links and residential estate at L'Agulhas for Prop Access (Pty) Ltd (a Gauteng-based empowerment group).