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## Limpopo Dept of Roads & Transport

### Limpopo aviation strategy and implementation plan December 2010

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## Section 1

### Introduction

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2.	Strategy Overview
3.	Strategies and Recommendations for Action by Location
4.	Implementation Plan

# Introduction

## Introduction

The Limpopo Department of Roads and Transport ("**the Client**") appointed Grant Thornton and Arcus GIBB to develop an airlift strategy for the Limpopo province – taking into consideration both passenger and freight commercial aviation and general aviation.

This document provides the outcomes of the strategy development process, as well as an implementation plan for the strategy.

## Objectives of the study

The two key objectives of the airlift strategy are to:

- Develop a strategy / model whereby air transport in the Limpopo province can be developed and expanded in such a way that the existing airports are utilised to capacity and demand for air transport (from both a freight and passenger perspective) is being met; and
- Define the role that the Department of Roads and Transport and other stakeholders should play within the realm of air transport in the province.

## Study approach

Aviation does not occur in isolation – it is both an enabler of the economy, and is enabled by the economy. Therefore it is imperative to understand the environment within which aviation and airlift exists – as illustrated.

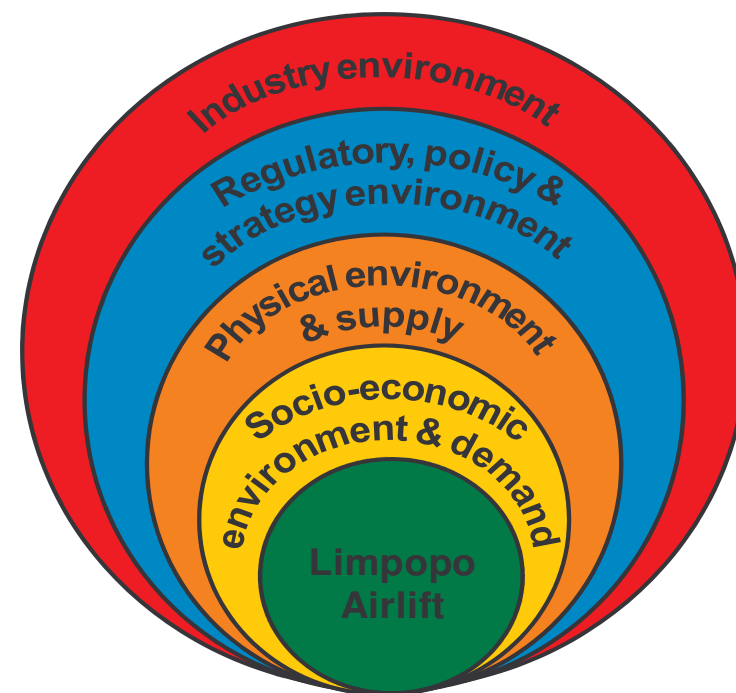
The Limpopo aviation strategy was developed within the above context, and has been approached from a geographic perspective. The strategy covers both commercial and general aviation. Aviation stakeholders in Limpopo and those with an interest in aviation in Limpopo have been consulted through interviews and workshops (on 20 May and 14 October).

## Purpose of strategy

The purpose of a strategy is to provide direction and guidance – in this case for the development of aviation in the province. When considering aviation developments in the province, those that are aligned to the strategy should be prioritised.

## Layout of the strategy document

The strategy document is comprised of 4 sections, i.e. an introduction, a broad overview of the strategy, more detail for each location in the province, and an implementation plan.





## Section 2

### Strategy overview

1.	Introduction
2.	Strategy Overview
3.	Strategies and Recommendations for Action by Location
4.	Implementation Plan

## Strategy overview

### The geographic realities of aviation in Limpopo – not 'one size fits all'!

The aviation situation in Limpopo is relatively complex. The realities of different locations within the province in relation to aviation are not the same.

A single strategy cannot be applied to the entire province, and therefore Limpopo's aviation strategy is geographically differentiated.






### Overarching strategy – safe flying in Limpopo

The Safe Flying Limpopo strategy is an overarching strategy that is aimed at stimulating aviation – both general and commercial – in Limpopo by creating an environment that can enable aviation to prosper.

### Tactical strategies for destinations in Limpopo










Based on the outcomes of the situation analysis and stakeholder consultation, five generic strategies were identified, as described in the table.

Nine locations within Limpopo were considered for these tactical aviation strategies, and for each location the most appropriate strategy was identified.

Strategy	Symbol	Description
<b>Grounded</b>		Nothing should be done as there is no, or very little potential, now or in the future, for aviation development
<b>Delayed</b>		The development of aviation will only take place in the long term and is awaiting other measures to be put in place
<b>Boarding</b>		There is some market potential, which should be left to the market to action and develop
<b>Take-off</b>		There is good market potential which would be picked up by the market with minimum intervention
<b>Catapulted Take-off</b>		There is market potential, but the development of aviation will only take place with significant intervention from government



## Strategy overview by location (cont.)

Location	Overarching strategy	Description
<b>Lephalale</b> 	Delayed catapulted take-off	In the short term this airport is expected to continue as is, though with some potential for limited passenger traffic in the future if the mining, energy and petrochemicals developments develop as planned. Government intervention will be required to stimulate any aviation development.
<b>Polokwane</b> 	Catapulted take-off	Polokwane has potential for both scheduled and non-scheduled passenger flights, though interventions are required to develop this demand. Any air freight developments would require significant intervention from government to materialise.
<b>Musina</b> 	Delayed	The passenger aviation demand for Musina airport is mainly in the form of private and chartered flights, which first require the upgrading of the airport, as well as destination marketing to attract visitors – hence the delayed strategy.
<b>Thohoyandou</b> 	Delayed	Similar to Musina airport, Thohoyandou first require upgrades to the existing airport and the development of the tourism destination before passenger flights will become a possibility – and then mainly in the form of unscheduled flights.
<b>Giyani</b> 	Grounded	There is no potential from a passenger or freight perspective, though the airport itself requires some attention in line with the Safe Flying Limpopo strategy.
<b>Tzaneen</b> 	Boarding	The existing private aircraft activity is expected to continue and grow, and the airport could develop some general aviation support services, though this will be done through market forces.
<b>Phalaborwa</b> 	Boarding	Airlink's ownership of the airport, together with the short runway limits the expansion possibilities of this airport, and therefore a maintenance strategy is proposed.
<b>Hoedspruit</b> 	Take-off	Hoedspruit is the only airport in the province where it is expected that growth will take place with minimum intervention. There may be an opportunity for GAAL to become involved, which may open up the opportunity to provide customs & immigration services from this airport.
<b>Burgersfort</b> 	Delayed	This airport is not expected to develop much in the short to medium term, and if developments take place in the long term, it will be mainly in the form of private planes (owned by the mining houses).

## Strategy overview by location (cont.)

### Existing and potential domestic routes

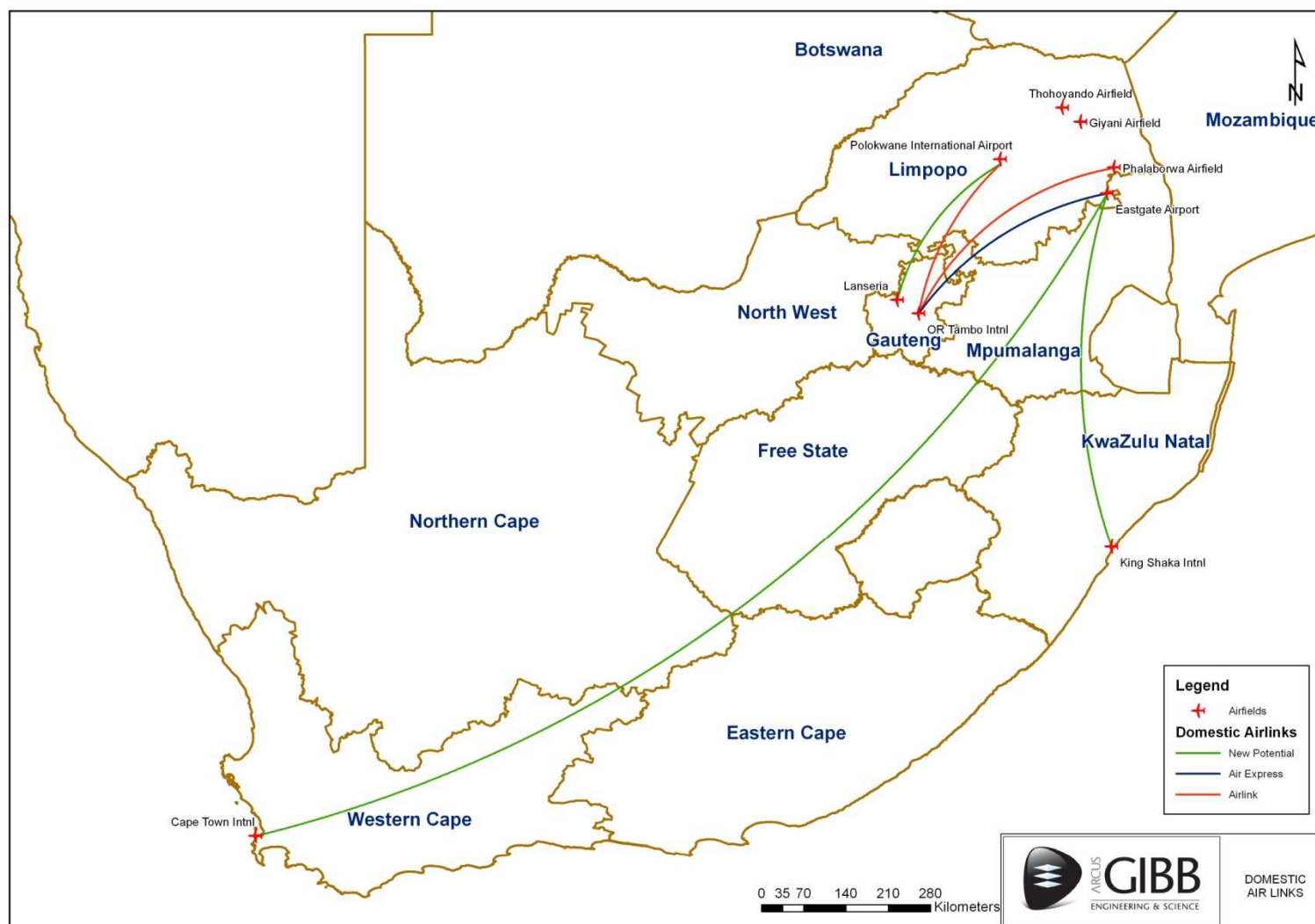
Based on an assessment of the market, it is recommended that existing routes be maintained, and that some new routes be considered.

The existing routes are:

- Polokwane – OR Tambo
- Phalaborwa – OR Tambo
- Hoedspruit – OR Tambo

The potential new routes are:

- Hoedspruit – Cape Town (short term)
- Hoedspruit – Durban (medium term)
- Polokwane – Lanseria (long term)



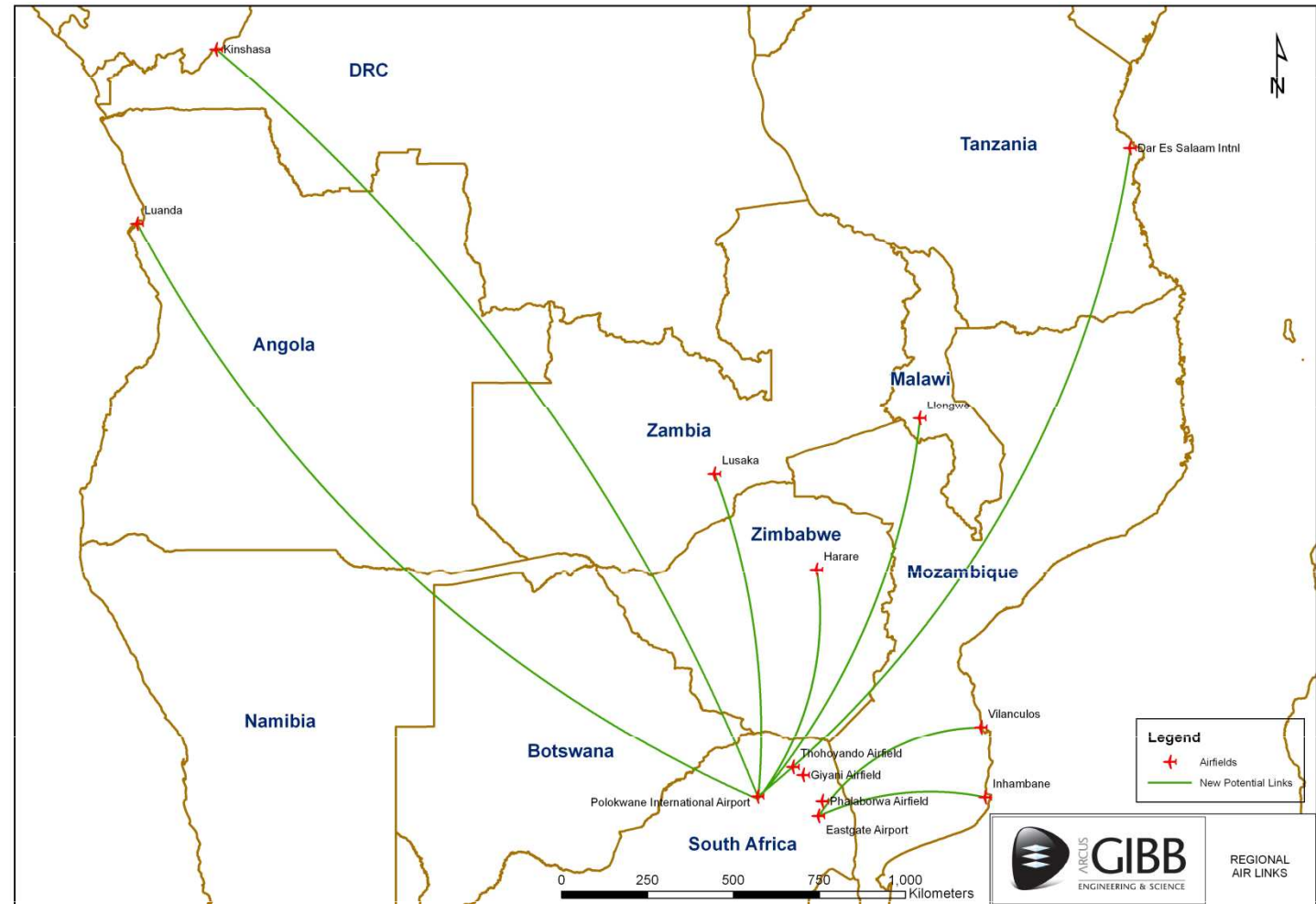
## Strategy overview by location (cont.)

### Potential regional routes

Based on an assessment of the market and proposed initiatives by the Limpopo Tourism & Parks Board to develop new markets, it is recommended that some new routes be considered.

From Hoedspruit, routes to Vilanculos and Inhambane should be considered in the medium term.

From Polokwane, routes to the capital cities (and others, if applicable) should be considered in the medium to long term.



## Section 3

### Strategies and recommendations for action by location

- |    |   |
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# Safe Flying Limpopo

## Geographic area of relevance

This strategy is relevant for the entire province.

## Description

Safe Flying Limpopo is about creating an enabling environment for aviation in Limpopo. It addresses the housekeeping issues and will ensure that Limpopo is a safe and pleasant destination for pilots from all over the world.

## Elements of Safe Flying Limpopo

The following elements form part of Safe Flying Limpopo :

- Ensuring airports and airfields in the province adhere to minimum safety standards through the implementation of – where relevant – joint public/private sector airfield management boards
- Improving the standards of safety in respect of flying in the province through closer interaction with pilots
- Ensuring that the aviation support services in the province, i.e. air traffic controllers and customs & immigrations officials, have the necessary technical and customer service skills to enable them to provide a good service to pilots flying to and from and across the Limpopo province
- Investigating and lobbying with the Department of Home Affairs to link airfields / airports with land border posts, where applicable
- Investigate the charges levied by airports and airfields in the province to maintain competitive pricing
- Maintain strong relationships with stakeholders that currently have aviation operations within the province

## Role of Department of Roads & Transport ("LDRT")

The Limpopo Department of Roads and Transport is the custodian of the Safe Flying Limpopo strategy, which means that it should drive the implementation of the strategy. In many instances this is merely a lobbying role, as other stakeholders are responsible for the implementation of the strategy elements.

## Other stakeholders

Other stakeholders that have an active role to play in the Safe Flying Limpopo strategy are:

- Owners and managers of air fields and airports (including local municipalities, the national Department of Public Works, flying clubs, the South African Air Force, the Gateway Airports Authority Limited ("**GAAL**"), Eastgate Airport (Pty) Ltd, Airlink)
- Air Traffic & Navigation Services South Africa ("**ATNS**") and the Lowveld Airspace Control Centre (at Air Force Base Hoedspruit)
- Department of Home Affairs and the South African Revenue Services
- Airlines with current scheduled routes into Limpopo (Airlink, SA Express)
- Training schools and private pilots based in Limpopo





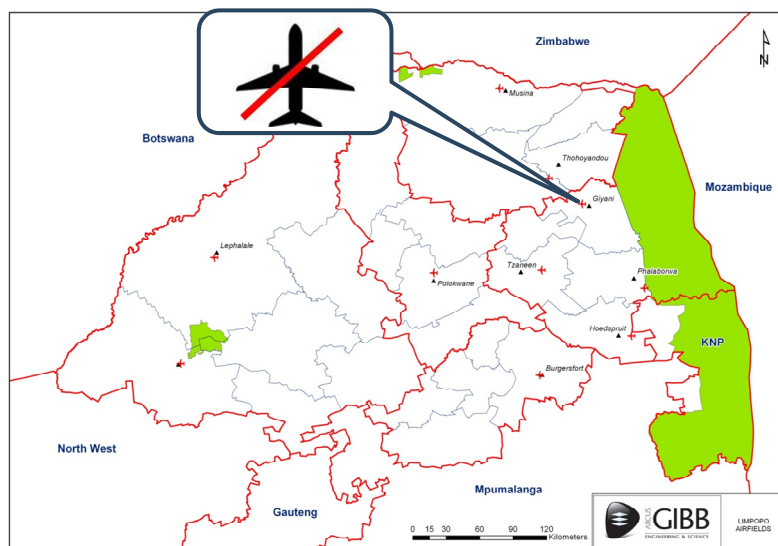
## Giyani Airport

### Geographic area of relevance

The Giyani airport is located near Giyani, in the Greater Giyani local municipality.

### Location strategy

Grounded.



### Freight potential

None / insignificant (only un-scheduled, if any). Local retailers sometimes fly in stock and wages.

### Passenger potential

None /insignificant. The tourism attraction value of the area is limited, and the area's population earn very low wages which limits their ability to make use of air travel. The estimated number of annual potential arrivals is less than 300 (Appendix A) – it is expected that these would make use of unscheduled flights.

### Potential scheduled routes

None.

### Potential unscheduled routes

None.

### Recommendation for interventions

It is recommended that – apart from upgrading the runway and adhering to basic safety principles, including proper fencing around the runway – nothing should be done at Giyani Airport.

### Role of Department of Roads & Transport

The Limpopo Department of Roads and Transport should assist the Giyani local municipality in upgrading the facilities at the Giyani airport in line with the Safe Flying Limpopo strategy.

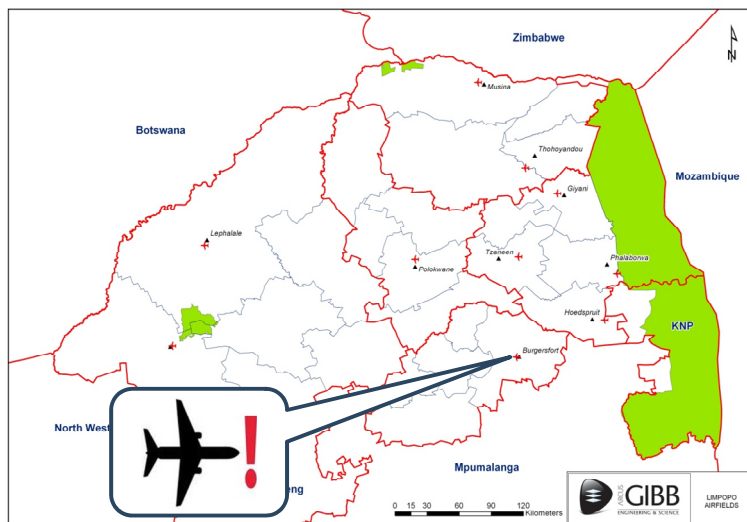
### Other stakeholders

Other stakeholders that are important to the Giyani airport are:

- The Greater Giyani Local Municipality
- The owners / management of the major retailers in town that make use of the air strip

The Burgersfort airport is located near Burgersfort, in the Greater Tubatse local municipality.

Delayed.



At present there is hardly any high-value freight in the area, and unless significant beneficiation of platinum takes place in the area that results in the manufacturing of high-value products, there is very little expectation for such freight to be available in the future. Therefore the air freight potential is low / insignificant.

Burgersfort is an important area from a platinum mining perspective, and it is expected that R15 billion investment will be made in the platinum mining sector in the Lydenburg / Burgersfort / Steelpoort area from 2003 to 2015.

At present, the majority of visitors to the area (95%+) stay over as a result of the mining activity in the area. There are 7 accommodation establishments in the Musina area listed in the Limpopo Tourism & Parks Board's directory, offering about 200 rooms/units. Applying calculated assumptions with regards to occupancy and length of stay, it is estimated that around 17 500 overnight visitors stayed in the area, and approximately 2 000 day visitors came to the area in 2009. It is estimated that about 5% of overnight visitors, or 900 visitors, and about 10% of day visitors, or 200 visitors, may have used scheduled air travel if it was available – equal to about 3 passengers per day (Appendix A). It is expected that some of this demand will be met by private planes of the mines.

Only if the mining and mining beneficiation industries develop significantly in this area is it expected to generate sufficient demand for scheduled passenger traffic, and therefore the proposed 'delayed' strategy for this airport.

None.

Possibly direct links with the Rustenburg area for the platinum mines.

The expectation is that Burgersfort's airport could develop in the medium to long term as an airport for private / unscheduled flights. It is therefore recommended that:

- The basic safety principles of the Safe F lying Limpopo strategy be implemented by upgrading and maintaining the runway in a good condition and ensuring that the runway is properly fenced off;
- Fuel be made available in the medium term, including a basic administrative office that can handle payments for fuel and landing fees.

## Burgersfort Airport (cont.)

### **Role of Department of Roads & Transport**

The Limpopo Department of Roads and Transport should assist the Greater Tubatse local municipality in upgrading the facilities at the Burgersfort airport in line with the Safe Flying Limpopo strategy.

### **Other stakeholders**

Other stakeholders that are important to the Burgersfort airport are:

- The Greater Tubatse Local Municipality
- Accommodation establishments in the area
- Mining companies operating in the area

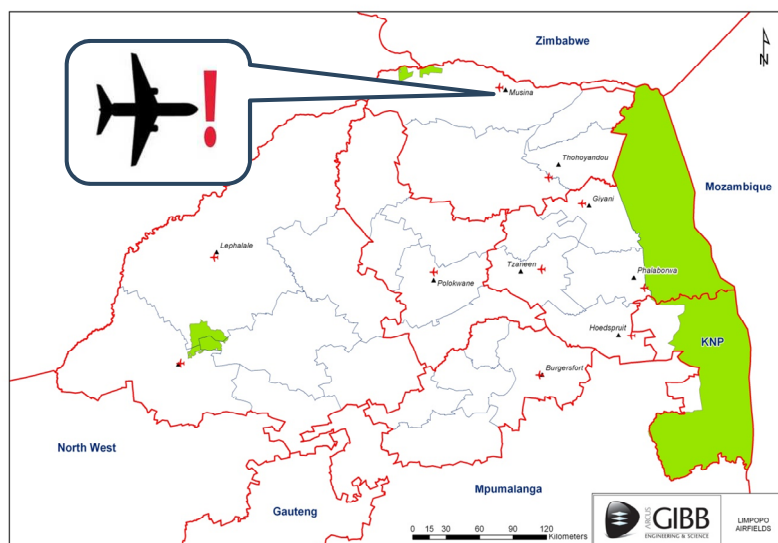
# Musina Airport

## Geographic area of relevance

The Musina airport is located near Musina, in the Musina local municipality.

## Location strategy

Delayed.



## Freight potential

At present there is hardly any high-value freight in the area, and there is very little expectation for such freight to be available in the future. Musina is mainly a thoroughfare for road and rail freight. Therefore the air freight potential is low / insignificant.

## Passenger potential

Musina is not an end destination, but rather a thoroughfare for travellers to and from Zimbabwe. An estimated 313 000 South Africans arrived from Zimbabwe at Beit Bridge border post in 2009.

## Passenger potential

In addition to South Africans, an estimated 1,7 million foreigners arrived at Beit Bridge from Zimbabwe, of which 84,5% were Zimbabwean citizens. It is assumed that most of these travellers were either en route to Polokwane or Gauteng, and therefore very few would regard Musina as their end destination, which results in very limited demand for air travel to Musina.

The Mapungubwe National Park to the west of Musina attracted about 32 000 visitors from April 2009 to March 2010, of which 1 600 were foreign. Of the domestic visitors, 71,6% were from within the Limpopo province. About 17 800 visitors entered the Kruger National Park at Pafuri – east of Musina – from April 2009 to March 2010, of which about 1 750 were foreign. Of the domestic visitors, 56% were from within the Limpopo province while 32% were from Gauteng. Were it to be available, it is estimated that no more than about 700 visitors may have chosen to fly to Mapungubwe and about 500 visitors may have chosen to fly to Pafuri – in both instances probably preferring direct flights instead of landing at Musina, which highlights the limited demand for passenger air travel.

There are 16 accommodation establishments in the Musina area listed in the Limpopo Tourism & Parks Board's directory, offering about 170 rooms/units. Applying calculated assumptions with regards to occupancy and length of stay, it is estimated that around 15 700 overnight visitors stayed in the area, and about 10% of day visitors, or 200 visitors came to the area in 2009. About 5%, of overnight visitors or 790 visitors, and about 3% of day visitors, or 700 visitors, may have used air travel if it was available. Most of these visitors are assumed to be hunters or business travellers related to the mining activities in the area.

In total about 2 500 visitors (is it estimated that 200 of the 700 Mapungubwe visitors are included in the visitors staying over in the area) could have flown into Musina using scheduled flights – equal to about 7 passengers per day (Appendix A).

Only if the mining and tourism industries develop significantly in this area is it expected to generate sufficient demand for scheduled passenger traffic, and therefore the proposed 'delayed' strategy for this airport.

## Musina Airport (cont.)

### Potential scheduled routes

None.

### Potential unscheduled routes

Possibly links with Gauteng as a key source market.

### Recommendation for interventions

The expectation is that Musina's airport could develop in the medium term as an airport for private / unscheduled flights. It is therefore recommended that:

- The basic safety principles of the Safe Flying Limpopo strategy be implemented by upgrading and maintaining the runway in a good condition and ensuring that the runway is properly fenced off;
- Fuel be made available, including a basic administrative office that can handle payments for fuel and landing fees;
- The Department of Home Affairs – through the Beit Bridge border post – be lobbied to provide ad-hoc customs & immigration services at the Musina airport when required.

### Role of Department of Roads & Transport

The Limpopo Department of Roads and Transport should assist the Department of Public Works and the Musina local municipality in upgrading the facilities at the Musina airport in line with the Safe Flying Limpopo strategy. The Department should further assist in lobbying the Department of Home Affairs.

### Other stakeholders

Other stakeholders that are important to the Musina airport are:

- The Musina Local Municipality
- The National Dept of Public Works
- The Beit Bridge border post / Dept of Home Affairs
- Limpopo Tourism & Parks Board
- SANParks
- Accommodation establishments in the area
- Mining companies operating in the area

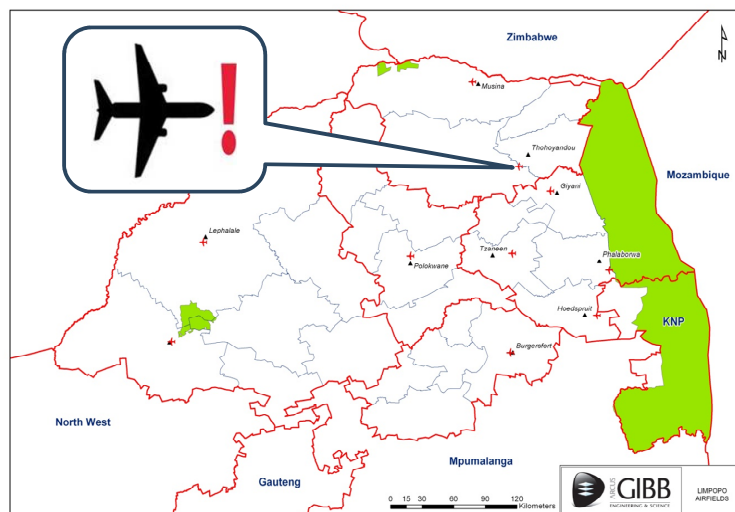
## Thohoyandou Airport

### Geographic area of relevance

The Thohoyandou airport is located near Thohoyandou, in the Thulamela local municipality.

### Location strategy

Delayed.



### Freight potential

At present there is hardly any high-value freight in the area, and there is very little expectation for such freight to be available in the future, unless significant agro-processing takes place in future, which is not likely in the short term. Therefore the air freight potential is low / insignificant.

### Passenger potential

The eastern Soutpansberg / Venda area has not yet developed as a tourism destination in its own right.

Thohoyandou is located en route to the Punda Maria gate of the Kruger National Park. Just more than 91 000 visitors entered the Kruger National Park through this gate, of which 88 800 were domestic visitors and more than 85% of them were from the Limpopo province. Were it to be available, it is estimated that no more than about 1 800 visitors may have chosen to fly to Thohoyandou in order to enter Kruger National Park at Punda Maria.

There are 26 accommodation establishments in the Thohoyandou area listed in the Limpopo Tourism & Parks Board's directory, offering about 530 rooms/units. In addition, there are 83 accommodation establishments in the neighbouring Makhado Municipality in Louis Trichardt, offering about 1 070 rooms/units. Applying calculated assumptions with regards to occupancy and length of stay, it is estimated that around 145 000 overnight visitors stayed in the area, and about 62 000 day visitors came to the area in 2009. It is estimated that about 2% of the non-camping overnight visitors, or about 2 500 visitors, and about 2% of day visitors, or 1 200 visitors, may have used scheduled air travel if it was available.

The Thulamela municipality has the largest population of all the local municipalities in the province, though only 41% of the population earn an income, and only 1% of the population earn an income of higher than R12 800 per month. This illustrates that there isn't a sufficient proportion of the local population that have the financial means to make use of air travel.

## Thohoyandou Airport (cont.)

### Passenger Potential (cont.)

In total about 5 200 visitors (it is estimated that 300 of the 1 800 Kruger Park visitors are included in the visitors staying over in the area) could have flown into Thohoyandou – equal to about 14 passengers per day. Most of these are expected to be from Gauteng.

Only if the tourism industry develop significantly in this area is it expected to generate sufficient demand for scheduled passenger traffic, and therefore the proposed 'delayed' strategy for this airport.

### Potential scheduled routes

None.

### Potential unscheduled routes

Possibly links with Gauteng as a key source market.

### Recommendation for interventions

The expectation is that the Thohoyandou airport could develop in the medium term as an airport for private / unscheduled flights, and perhaps for small aircraft scheduled flights in the long term as the Soutpansberg becomes more established as a tourism destination. It is therefore recommended that:

- The basic safety principles of the Safe Flying Limpopo strategy be implemented by upgrading and maintaining the runway in a good condition and ensuring that the runway is properly fenced off;
- Fuel be made available, including a basic administrative office that can handle payments for fuel and landing fees;
- Make an arrangement with local taxi drivers and transfer companies to provide transfers from the airport as required by private pilots.

### Role of Department of Roads & Transport

The Limpopo Department of Roads and Transport should assist the Thulamela local municipality in upgrading the facilities at the Thohoyandou airport in line with the Safe Flying Limpopo strategy. The Department should further assist in increasing the available services provided as and when required by the travellers to the airport in future.

### Other stakeholders

Other stakeholders that are important to the Thohoyandou airport are:

- The Thulamela Local Municipality
- Limpopo Tourism & Parks Board
- SANParks
- Accommodation establishments in the area
- Military based at Makhado air force base
- Vhembe traditional leaders



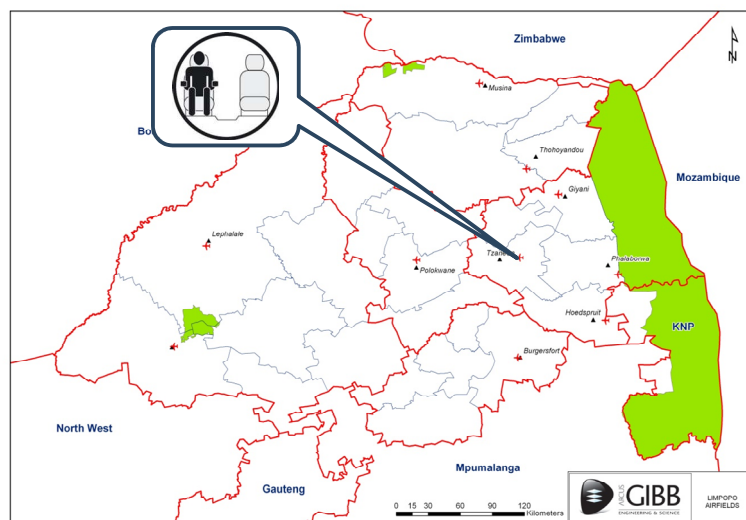
## Tzaneen Airport

### Geographic area of relevance

The Tzaneen airfield is located near Tzaneen, in the Greater Tzaneen local municipality.

### Location strategy

Boarding.



### Freight potential

At present there is very little beneficiation / manufacturing taking place to produce high-value freight in the area. The rail freight linkages from this area to the ports of Maputo and Richard's Bay are well developed. The air freight potential is low / insignificant.

### Passenger potential

The Tzaneen airfield is currently mainly used by private pilots of the local flying club – some of whom operate their businesses from Tzaneen and use their private aircraft to travel to Gauteng and other destinations in South Africa for business purposes. It is unknown how many flights are conducted from this airfield on an annual basis. The Greater Tzaneen local municipality is host to 59 registered aircraft – the second highest number of aircraft in a Limpopo local municipality after Polokwane local municipality – which would suggest that the airfield is busy with private flights.

As a tourism destination, the Greater Tzaneen area with Magoebaskloof, Modjadiskloof and the nature reserves of the Lowveld nearby (it is only about 80 km from the Phalaborwa gate into the Kruger National Park) has relatively good potential. There are a variety of accommodation establishments available in the area, and regular festivals also attract visitors. However, being so close to Phalaborwa, and being only about 100 km from Polokwane, and about 120 km from Hoedspruit, travellers may make use of either of these airports for scheduled flights.

There are 85 accommodation establishments in the Greater Tzaneen area listed in the Limpopo Tourism & Parks Board's directory, offering 1 015 rooms/units. Applying calculated assumptions with regards to occupancy and length of stay, it is estimated that around 104 000 overnight visitors stayed in the area, and about 26 000 day visitors came to the area in 2009. It is estimated that about 3% of the non-camping overnight visitors, or about 2 600 visitors, and about 3% of the day visitors, or 800 visitors, may have used air travel if affordable air travel was available – equal to about 9 passengers per day (Appendix A).

55% Of the Tzaneen municipality's population earn no income, and only 1,1% of the population earn an income of higher than R12 800 per month. This illustrates that there isn't a sufficient proportion of the local population that have the financial means to make use of air travel.



## Tzaneen Airport (cont.)

### Potential scheduled routes

None.

### Potential unscheduled routes

Possibly links with Gauteng as a key source market.

### Recommendation for interventions

Tzaneen is a recognised airfield for private planes, and it is therefore recommended that it be maintained as an airfield for general aviation, with a focus on private aircraft. The area can be served from either Polokwane International or Phalaborwa Airport with scheduled flights.

It is recommended that:

- The basic safety principles of the Safe Flying Limpopo strategy be adhered to in consultation with the Tzaneen airfield board;
- Develop it as a support centre for general aviation in the Lowveld, with aircraft maintenance of small to medium sized aircraft being a specific focus area;
- The airfield / location be established as a recognised training area for private pilots, and arrangements be made with local accommodation establishments to house trainee pilots.

### Role of Department of Roads & Transport

The Limpopo Department of Roads and Transport should leave the development of the Tzaneen air field to the local stakeholders, and only provide guidance in respect of the Limpopo Safe Flying strategy and guidelines.

### Other stakeholders

Other stakeholders that are important to the Tzaneen airfield are:

- The Greater Tzaneen Local Municipality
- Local Tzaneen flying club
- Aircraft owners renting hangar space at Tzaneen airfield
- Limpopo Tourism & Parks Board
- Accommodation establishments in the area

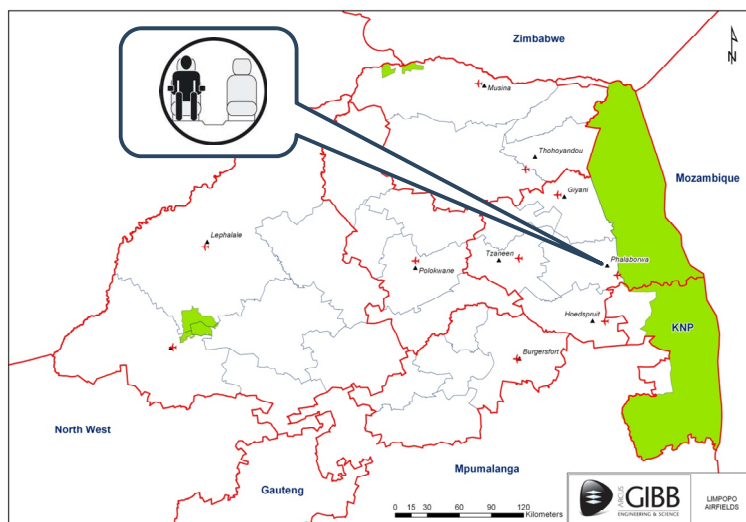
## Kruger Gateway Airport (Phalaborwa)

### Geographic area of relevance

The Kruger Gateway Airport is located alongside the border of the Kruger National Park in Phalaborwa, in the Ba-Phalaborwa local municipality.

### Location strategy

Boarding.



### Freight potential

At present there is very little beneficiation / manufacturing taking place to produce high-value freight in the area. The rail freight linkages from this area to the ports of Maputo and Richard's Bay are well developed and mainly transport the ore from mines in the area. The air freight potential is low / insignificant.

In addition, the airport itself does not offer opportunity for expansion to provide air freight facilities.

### Passenger potential

The Kruger Gateway currently handles about 20 000 passengers (including both arriving and departing passengers) per annum. With the current flights and aircraft used on the route from Johannesburg to Phalaborwa, the airport has the capacity to handle an additional 8 000 – 9 000 arriving and 8 000 – 9 000 departing passengers.

The airport is located very close to the Phalaborwa gate of the Kruger National Park. Just more than 192 500 visitors entered the Kruger National Park through this gate, of which 170 800 were domestic visitors and almost 69% of them were from the Limpopo province. If flights from Johannesburg to Phalaborwa were more affordable (at least 35-40% cheaper than current fares), it is estimated that about 8 300 visitors per annum may fly to Phalaborwa in order to enter the Kruger National Park – as opposed to the estimated 3 000 – 4 000 per annum that currently do so.

Phalaborwa is also a destination for business day visitors to the local mines. It is estimated that 55 - 60% of passengers are accounted for as a result of the mining activity in the area. The mines also own and fly their own planes from Richards Bay and Gauteng to Phalaborwa. However, the life of the mines in the area are coming to an end, and the municipality hope to replace mining activity with tourism.

There are 49 accommodation establishments in the Ba-Phalaborwa area listed in the Limpopo Tourism & Parks Board's directory, offering 680 rooms/units. Applying calculated assumptions with regards to occupancy and length of stay, it is estimated that around 70 000 overnight visitors stayed in the area, and about 30 000 day visitors came to the area in 2009. It is estimated that about 8% of the non-camping overnight visitors, or about 5 300 visitors, and about 8% of the day visitors, or about 2 300 visitors could have used air travel.

## Kruger Gateway Airport (Phalaborwa) (cont.)

### Passenger potential (cont.)

Only 48,8% of the Ba-Phalaborwa municipality's population earn an income, while only 3,1% of the population earn an income of higher than R12 800 per month, which illustrates the limited potential for air travel from the local population.

### Growth potential

Overall, it is evident that there is capacity in the existing flights to Phalaborwa for growth, with the total estimated number of air travellers at 15 900 (Appendix A), which represents an estimated 58% growth from current figures. This assumes that the current aircraft will be maintained on the route.

### Potential scheduled routes

None in addition to the existing flights from OR Tambo International.

### Potential unscheduled routes

Possibly links with Gauteng as a key source market.

### Recommendation for interventions

It is recommended that the status quo be maintained in Phalaborwa, but that an effort should be made to increase the capacity utilisation of the airport.

It is recommended that:

- The basic safety principles of the Safe Flying Limpopo strategy be adhered to in consultation with the owners of the airport (Airlink);
- Airlink be lobbied to charge competitive landing fees for private pilots;
- Airlink be lobbied to review the airfares they charge for flights from Johannesburg to Phalaborwa in consultation with the local tourism product owners / operators.

### Role of Department of Roads & Transport

The Limpopo Department of Roads and Transport should leave the development and operation of the Kruger Gateway Airport to Airlink, and only provide guidance in respect of the Limpopo Safe Flying strategy and guidelines. The Department should further assist the local tourism and aviation stakeholders to lobby Airlink in respect of their fares and fees.

### Other stakeholders

Other stakeholders that are important to the Kruger Gateway airport are:

- Airlink
- The Ba-Phalaborwa Local Municipality
- Local pilots, training schools and flying clubs
- Limpopo Tourism & Parks Board
- Accommodation establishments in the area
- SANParks

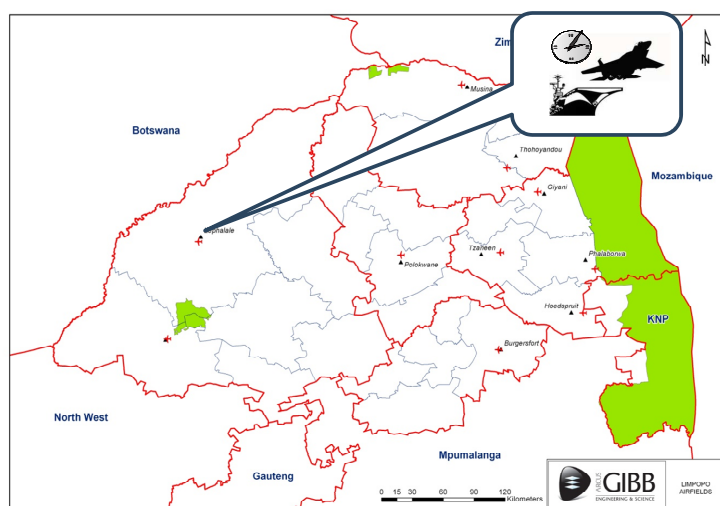
# Lephalale Airport

## Geographic area of relevance

The Lephalale airfield is located to the southwest of Lephalale (formerly Ellisras) in the Lephalale local municipality.

## Location strategy

Delayed catapulted take-off.



## Freight potential

Lephalale's economy is envisaged to grow substantially in the next 20 – 30 years with the introduction of a new power plant at Medupi, coal mines and a new Sasol coal-to-liquid petroleum plant. However, none of these developments will result in high-value freight, and as such the potential for air freight is limited.

There may be an opportunity to transport some specialised mining equipment to the area with unscheduled, private planes, and some courier-type cargo as the economy of the area develops.

## Passenger potential

Current aircraft movements at Lephalale are limited to the private planes of the mines and Eskom for transporting their staff and management to the area – mainly from Gauteng.

There are 77 accommodation establishments in and around Lephalale listed in the Limpopo Tourism & Parks Board's directory, of which the majority (53%) are game lodges or hunting lodges. Collectively, these establishments offer 740 rooms/units. Applying calculated assumptions with regards to occupancy and length of stay, it is estimated that around 89 000 overnight visitors stayed in the area and a similar number of day visitors came to the area in 2009. It is estimated that about 2% of the non-camping overnight visitors, or about 1 800 visitors, and about 3% of the day visitors, or 2 700 visitors, may have used scheduled air travel if it was available. Most of the travellers that may have used air travel would be hunters or business travellers.

In addition to the business visitors to the mines, Eskom and Sasol plants, leisure visitors are attracted to the Welgevonden Private Game Reserve located south of Lephalale adjacent to the Marakele National Park. There are 12 lodges in the reserve itself.

The Marakele National Park 80 km to the southwest of Lephalale attracted about 24 000 visitors from April 2009 to March 2010, of which 1 200 were foreign. Of the domestic visitors, 75% were from Gauteng. Were scheduled flights to be available, it is estimated that no more than about 500 visitors may have chosen to fly to Marakele – probably preferring a direct flight instead of landing at Lephalale, which highlights the limited demand for passenger air travel.

Overall, an estimated 4 900 visitors (mainly from Gauteng) may fly to Lephalale – equal to about 13 passengers per day (Appendix A). Though this is similar to the number of potential passengers that could fly into Thohoyandou, it is expected that in future, as the economy of the area develops, the number of business travellers to and from Lephalale will increase – dependent on the economic growth of the area. Hence the delayed strategy.

## Lephalale Airport (cont.)

### Potential scheduled routes

None at present – in future perhaps links with Gauteng.

### Potential unscheduled routes

Links with Gauteng and possibly Sasolburg and other locations where Eskom has power stations.

### Recommendation for interventions

As the economic growth – and the subsequent growth in business travellers – is expected to take time to materialise, it is not envisaged that the Lephalale Airport will develop in the short term. Further, it is not expected that the market will result in the development of an airport that can handle scheduled flights and larger aircraft, and it is therefore required that some intervention be made to develop the airport at Lephalale, but only in the medium to long term (delayed catapulted take-off strategy).

It is envisaged that the Lephalale airport could develop in a similar manner than the Phalaborwa airport.

It is therefore recommended that:

- The basic safety principles of the Safe Flying Limpopo strategy be implemented in the short term, in consultation with the Lephalale local municipality, the National Department of Public Works (who reportedly owns the current landing strip) and the current users of the airfield;
- Fuel – both Avgas and Jetfuel – be made available at Lephalale in the medium term;
- A partnership be established between government and the private sector in the form of Eskom, the mines and Sasol for the development of the airport in the medium to long term;
- Hunting packages be compiled that includes a charter flight from Johannesburg to Lephalale;

### Recommendation for interventions (cont.)

- An online scheduling service be established to co-ordinate private corporate flights in such a way that empty seats may be made available to paying customers (e.g. De Beers has a jet which they use to transport people from Johannesburg to Kimberley, but when available, they make seats available to people not affiliated with De Beers at a fee). This can enable travellers to access direct routes that may not otherwise be available (e.g. direct from Lephalale to Phalaborwa);
- In the long term, research be conducted to establish what types of aircraft are used in the area, and then to establish maintenance operations that can service such aircraft.

### Role of Department of Roads & Transport

The Limpopo Department of Roads and Transport should drive the development of the Lephalale airport in the medium to long term, as it is an important economic growth driver for the province. It should further provide guidance in respect of the Limpopo Safe Flying strategy and guidelines to the local aviation stakeholders.

### Other stakeholders

Other stakeholders that are important to the Lephalale airport are:

- The Lephalale Local Municipality
- The National Department of Public Works
- Eskom
- Exxaro
- Sasol
- Local pilots, training schools and flying clubs
- Limpopo Tourism & Parks Board
- Accommodation establishments in the area
- SANParks
- Professional hunters

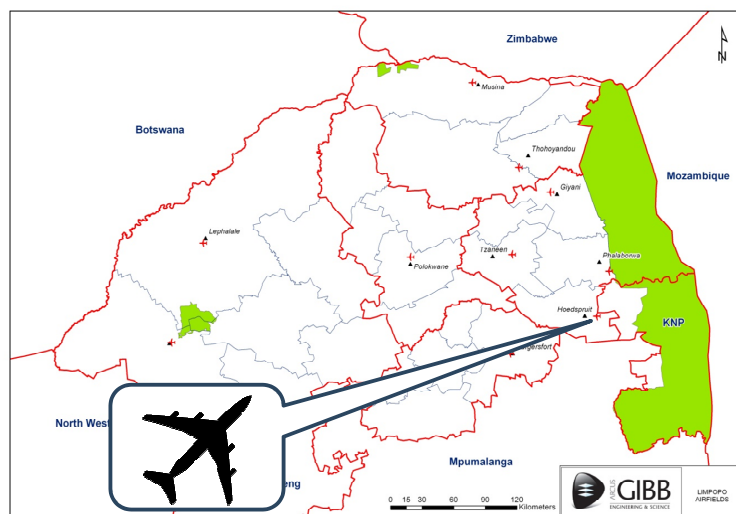
## Eastgate Airport (Hoedspruit)

### Geographic area of relevance

The Eastgate Airport is located to the east of Hoedspruit on the Hoedspruit Airforce base in the Maruleng local municipality.

### Location strategy

Take-off.



### Freight potential

Freight is unlikely at Hoedspruit as a result of the restrictions on the development of new facilities enforced by the military, as well as the fact that the local train station is well positioned to transport freight to Maputo and Richards Bay. There may be some courier-type cargo, though this is probably limited.

### Passenger potential

The Eastgate airport currently handles about 48 000 passengers (including both arriving and departing passengers) per annum. With the current flights and aircraft used on the route from Johannesburg to Hoedspruit, the airport has the capacity to handle an additional 10 000 – 11 000 arriving and 10 000 – 11 000 departing passengers. The airport mainly serves the foreign leisure market that visit the game lodges in the area, with very few local business travellers.

There are 117 accommodation establishments in and around Hoedspruit listed in the Limpopo Tourism & Parks Board's directory, of which the majority (more than 70%) are game lodges. Collectively, these establishments offer 1 267 rooms/units. Applying calculated assumptions with regards to occupancy and length of stay, it is estimated that around 136 800 overnight visitors stayed in the area, and about 34 000 day visitors came to the area in 2009. It is estimated that about 34% of the non-camping overnight visitors, or about 44 600 visitors, and about 5% of the day visitors, or 1 700 visitors, could have used air travel. The key source markets for the destination are visitors from Gauteng, Europe and the USA.

The Eastgate airport is located about 80 km from the Orpen gate of the Kruger National Park. Just more than 142 000 visitors entered the Kruger National Park through this gate, of which 104 000 were domestic visitors and almost 37% of them were from Gauteng. If flights from Johannesburg to Phalaborwa were more affordable (at least 35-40% cheaper than current fares), it is estimated that about 10 900 visitors per annum may fly to Eastgate in order to enter the Kruger National Park – as opposed to the estimated 5 800 – 6 00 per annum that currently do so.

Though the current population of Hoedspruit is small and would not necessarily make use of air travel, a number of residential developments have been, or are in the process of being developed in the area – targeting buyers in Gauteng. As these buyers are generally considered to be from middle to upper income groups, they could potentially be an additional market for flights between Hoedspruit and Gauteng – provided that such flights are priced at an affordable level.



## Eastgate Airport (Hoedspruit) (cont.)

### Growth potential

Overall, it is evident that there is capacity in the existing flights to Eastgate for growth, with the total estimated number of arrivals at 57 200 (Appendix A), which represents a growth in arrivals of 138%, which will require the introduction of additional flights, or larger aircraft. However, there is also potential to grow the market even further with the introduction of new routes.

### Potential scheduled routes

In addition to maintaining the existing scheduled flights between Hoedspruit and Johannesburg, some additional routes show potential. The scheduled linkages listed below are highlighted as potential linkages, and none of the routes mentioned has undergone feasibility testing:

- Hoedspruit – Cape Town (many foreign visitors staying at lodges in the area combine their visit with a couple of days in Cape Town either before or after their visit to the bushveld)
- Hoedspruit – Durban (this could provide access for both domestic visitors from Gauteng and foreign visitors wanting to combine a visit to the KZN coast and the Kruger National Park – initially this link may be provided in the form of a charter operation, and it is estimated that establishing this route will require funding of at least R10 million)

### Potential unscheduled / charter routes

The unscheduled / charter linkages listed below are highlighted as potential linkages, and none of the routes mentioned has undergone feasibility testing:

- Hoedspruit – Mozambican beaches (Vilanculos / Inhambane)
- Hoedspruit – Europe (direct charters from east or western Europe to experience the bushveld / Kruger National Park – only expected to materialise in the longer term)

### Airlines to consider

Though the airlines currently offering flights to Limpopo should be considered for the operation of new routes, it is expected that competition will result in more affordable fares to destinations in Limpopo, and where possible, alternative airlines to the ones currently servicing the province should be considered:

### Airlines to consider (cont.)

- For both potential scheduled routes, one of the low-cost carriers could be considered. Only Airlink currently offers direct links from Cape Town and Durban to Kruger Mpumalanga International Airport. 1Time could be an option as they are in the process of expanding their business. It may prove more viable if one airline operate both routes;
- For regional linkages to the Mozambican beaches, a small company like Federal Air could be considered, as they currently offer direct flights from Johannesburg to Vilanculos via Kruger Mpumalanga International Airport. Other smaller operators to consider include Sefofane Air Charters or Bateleur Air Charters.

### Recommendation for interventions

There is sufficient market available for the Hoedspruit area that the market for aviation will probably develop by itself over time, but some support from government in respect of marketing and support services will boost the destination's appeal.

It is recommended that:

- The basic safety principles of the Safe Flying Limpopo strategy be adhered to in consultation with the owners of the airport (Eastgate (Pty) Ltd);
- The Department of Home Affairs and SARS be lobbied to provide customs and immigration facilities that will enable unscheduled regional linkages for private and charter flights;
- Eastgate and the South African Air Force be lobbied to charge competitive landing fees for private pilots;
- SA Express be lobbied to review the airfares they charge for flights from Johannesburg to Hoedspruit in consultation with the local tourism product owners / operators.
- Consultations be initiated with the identified airlines to determine what their requirements are to consider these routes;
- Feasibility studies be conducted for potential new scheduled and unscheduled routes;
- A partnership be established with the Tzaneen airfield for general aviation support services;

## Eastgate Airport (Hoedspruit) (cont.)

### **Recommendation for interventions (cont.)**

- A closer relationship be forged between Polokwane International Airport and Eastgate to facilitate easy and speedy customs and immigration clearances for private flights should this not be available at Eastgate itself;
- An investigation should be conducted to determine whether it would be worthwhile for the Gateway Airports Authority Limited ("**GAAL**") to become a shareholder in the Eastgate Airport.

### **Role of Department of Roads & Transport**

The Limpopo Department of Roads and Transport should leave the development and operation of the Eastgate Airport to the private sector, and only provide guidance in respect of the Limpopo Safe Flying strategy and guidelines. The Department should further assist the airport in lobbying the Department of Home Affairs and SA Express, and if required, assist with negotiations with other airlines.

### **Other stakeholders**

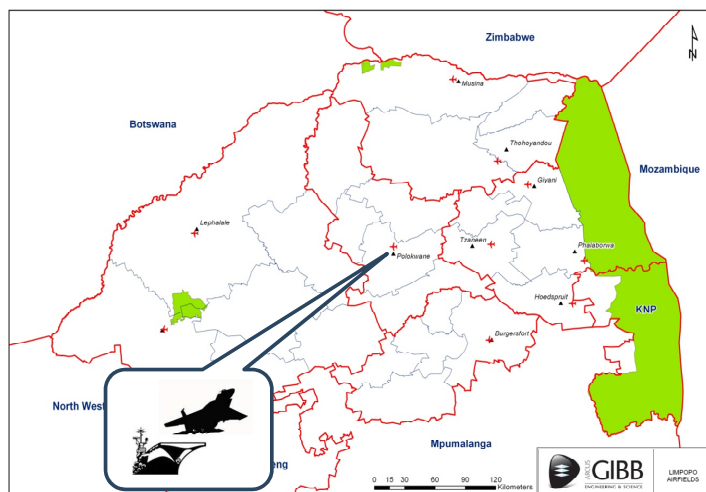
Other stakeholders that are important to the Eastgate airport are:

- SA Air Force
- SA Express
- The Maruleng Local Municipality
- Local pilots, training schools and flying clubs
- Limpopo Tourism & Parks Board
- Game lodges and other accommodation establishments in the area
- SANParks
- GAAL



The Polokwane International Airport is located just north of Polokwane in the Polokwane local municipality.

Catapulted take-off.



With reference to the discussion in Appendix B, it is estimated that Polokwane International could attract about 3 600 tonnes of air freight per annum, which equates to about 45 flights by an 80-tonne freighter aircraft, i.e. less than one flight a week.

The following indicators that were used as input into the strategy development process:

### Economic Indicators

Current economic production patterns seem to indicate a fairly low organic potential for air freight. As such other supporting strategies will have to be implemented if air freight is to grow significantly. These may include beneficiation strategies, other industrial development strategies and programmes and even the introduction of a Special Economic Zone in Polokwane.

## Market Considerations

There is currently not an established air freight market. This could be interpreted as being the case as due to there being no real demand for air freight. There may be a number of reasons for this such as unsuitable products, a weak market structure as well as proximity to Gauteng and OR Tambo International Airport. The type of commodities produced in Limpopo is by and large not of a suitable nature for air freight. Development of air freight will in all likelihood not take place organically which means that a number of concerted efforts will have to be undertaken to stimulate (develop) demand for air freight.

## Infrastructure Indicators

PIA is the only airport with some infrastructure suitable for air freight. It also has International status which is needed to comply with customs requirements. However, PIA has to contend with ORTIA which is a well established hub in the heartland of the South African Economy. PIA would also need substantial investment to lure business away from ORTIA (such investment would be in warehousing, cold storage, loading and off-loading equipment, ICT and the development of strategic partnerships with Freight Forwarders and Airlines).

## Current Aviation Patterns

Currently Limpopo is served by regional airlines with smaller planes. This limits the air freight capacity as these types of planes were designed for commuter use, rather than having belly freight capacity. Significant capacity (about 1000kg only) becomes available in airplanes in the Boeing 737 and larger classes.

## Polokwane International Airport (cont.)

### Freight strategy indicators (cont.)

#### Geographical Considerations

If it is accepted that PIA is the most likely, and suitable, location for launching air freight activities then location becomes a double edged sword. PIA's location is advantageous for serving many of the more northern SADC countries. Unfortunately PIA is close to ORTIA (about 153 nautical miles). This means that both northbound and southbound traffic actually overfly PIA on their way to their respective destinations. The close proximity of PIA to ORTIA prevents the larger aircraft from either taking off from ORTIA and landing at PIA or first landing at PIA on their way to ORTIA due to the costs associated with additional landings and take-offs (fuel, maintenance and time).

#### Governance Issues

A decision to actively influence the growth of air freight in Limpopo will be a multi-level one where more than one Department needs to be involved. In this instance the Department of Roads and Transport will most probably play a role of facilitation and driving the process.

### Passenger potential

The Polokwane International airport currently handles about 45 000 passengers (including both arriving and departing passengers) per annum. With the current flights and aircraft used on the route from Johannesburg to Polokwane, the airport has the capacity to handle an additional 12 000 – 14 000 arriving and 12 000 – 14 000 departing passengers (i.e. the number of passengers could be increased by 50% by filling the existing capacity). The capacity of the airport itself is much higher, and during the World Cup period it was highlighted that it could handle up to 10 000 passengers per month. The airport mainly serves the domestic business market (mainly in the form of government officials) that visit Polokwane.

There are 109 accommodation establishments in and around Polokwane listed in the Limpopo Tourism & Parks Board's directory, of which the largest proportion (42%) are guest houses. Collectively, these establishments offer 2 674 rooms/units.

### Passenger potential (cont.)

Applying calculated assumptions with regards to occupancy and length of stay, it is estimated that around 313 500 overnight visitors stayed in the area, and around 257 000 day visitors came to the area in 2009. It is estimated that about 8% of the non-camping overnight visitors, or about 25 000 visitors, and 10% of the day visitors, or about 25 700 visitors, could have used air travel. The key source market for the destination are visitors from Gauteng.

The population of the Polokwane local municipality are in a better position to afford air travel, with more than 11 400 people earning an income of above R12 800 per month. Though this is higher than in many of the other areas of Limpopo, compared to the volumes in Gauteng, Cape Town and Durban, this is a relatively small number of potential passengers. Residents of Polokwane visiting Gauteng tend to also drive to Gauteng because of the relatively high fares on the Polokwane – Johannesburg route.

The government officials and politicians working in Polokwane are often required to visit Pretoria or Cape Town as part of their official duties. However, due to the travel allowance paid to these officials, and the relative short distance from Polokwane to Pretoria, many officials opt to drive instead of fly to ORTIA from where they still have to drive another half an hour to 45 minutes to reach Pretoria.

Many SADC visitors come to South Africa to obtain goods and services not available or not of the required quality in their home country. The Limpopo Tourism and Parks Board hopes to position Polokwane, with its good quality medical facilities and the new Limpopo mall opening soon, as a destination where SADC residents can come for medical services and shopping. An opportunity may therefore exist to establish direct air linkages between the capitals of some SADC countries and Polokwane to support the efforts of the Limpopo Tourism & Parks Board.

## Polokwane International Airport (cont.)

### Growth potential

Overall, it is evident that there is capacity in the existing flights to Polokwane for growth, but with an estimated 50 700 potential arriving passengers (Appendix A), which represents a 125% growth in the total number of arriving passengers, the introduction of larger aircraft or additional aircraft may be required. However, the numbers may still be somewhat low to entice the low cost carriers. There may be an opportunity to grow the market even further should the affordability of fares be addressed, because the market is very price-sensitive. In addition, there may be an opportunity to create new markets through linkages with SADC.

### Potential scheduled linkages

In addition to maintaining the existing route between Polokwane International and OR Tambo International airport to provide travellers with connections to other destinations, the following new scheduled linkages could be considered. The scheduled linkages listed below are highlighted as potential linkages, and none of the routes mentioned has undergone feasibility testing:

- Polokwane – Lanseria (the access to this airport north of Johannesburg is easier for many travellers than the congested area around OR Tambo)
- SADC linkages (dependent on the promotion of the destination by Limpopo Tourism & Parks Board and partnerships established with the relevant countries):
  - Polokwane – Harare
  - Polokwane – Lusaka
  - Polokwane – Lilongwe
  - Polokwane – Luanda
  - Polokwane – Kishasa
  - Polokwane – Dar es Salaam

### Airlines to consider

Though the airlines currently offering flights to Limpopo should be considered for the operation of new routes, it is expected that competition will result in more affordable fares to destinations in Limpopo, and where possible, alternative airlines to the ones currently servicing the province should be considered:

- Kulula or 1Time could be considered for the proposed link between Polokwane and Lanseria (long term);

### Airlines to consider (cont.)

- For SADC routes, Airlink or SA Express could be considered, but also the airlines operating in the foreign countries, such as Air Zimbabwe (Zimbabwe), Zambezi Airlines (Zambia), Air Malawi (Malawi) or TAAG (Angola).

### Recommendation for interventions

The development of Polokwane International Airport is not expected to happen as a result of market forces, and government will have to intervene in some way to ensure that this airport lives up to its potential. Thus the recommendation for a catapulted take-off strategy.

It is recommended that:

- The basic safety principles of the Safe Flying Limpopo strategy be adhered to in consultation with the management of the airport (GAAL);
- The Department of Home Affairs and SARS be lobbied to provide better quality, friendlier and more efficient customs and immigration services at Polokwane to entice more private pilots to use the airport en route to destinations in the rest of the region;
- Airlink be lobbied to review the airfares they charge for flights from Johannesburg to Polokwane by either introducing a larger aircraft on the route or through negotiations in respect of incentives;
- Consultations be initiated with the identified airlines to determine what their requirements are to consider the routes from Polokwane;
- Partnerships be established through Limpopo Tourism & Parks Board with other SADC countries to initiate discussions on the establishment of direct routes from Polokwane to these countries;
- An air freight hub should only be established in the longer term once the economy of the province is producing more high-value freight. Freight handling facilities need to be developed at the airport and the other requirements of cargo hubs as outlined in Appendix C should be considered before moving ahead with this. In the interim, a liaison person should establish relationships with all the relevant producers of high-value freight that currently flies from OR Tambo to enable the facilitation of ad-hoc freighter aircraft directly from Polokwane if required;

## Polokwane International Airport (cont.)

### Recommendation for interventions (cont.)

- A partnership be established with the Tourism stakeholders to facilitate charter flights in the event of large events being hosted in the city;
- A closer relationship be forged between Polokwane International Airport and the Polokwane Civil Airport to ensure collaboration and to eliminate counter-productive competition between the two airports, while at the same time improving the environment for flying around Polokwane;
- Develop and expand the opportunity for aircraft maintenance operations at PIA, and solicit maintenance contracts from airlines in other SADC countries as well as South African airlines (e.g. 1Time owns Safair Technical);
- Establish a training academy for aviation support services, i.e. aircraft technicians (linked to the above action to solicit contracts from SADC countries by ensuring that the technical skills and certifications in respect of specific types of aircraft are in place), air traffic controllers, etc.

### Role of Department of Roads & Transport

The Limpopo Department of Roads and Transport should drive the development of PIA with the assistance of GAAL. It should further provide guidance in respect of the Limpopo Safe Flying strategy and guidelines, and assist in lobbying airlines and other stakeholders, such as economic development.

### Other stakeholders

Other stakeholders that are important to the Polokwane International Airport are:

- GAAL
- Airlink
- The Polokwane Local Municipality
- Other scheduled airlines
- Local pilots, training schools and flying clubs – operating from both PIA and Polokwane Civil
- Limpopo Tourism & Parks Board
- Accommodation establishments in the area
- Producers of high-value freight

## Section 4

### Implementation Plan

- |    |   |
|----|---|
| 1. | Introduction  |
| 2. | Strategy Overview   |
| 3. | Strategies and<br>Recommendations for Action by<br>Location |
| 4. | Implementation Plan   |

## Implementation Plan

Action	Affected airports	Driver	Timeframe	Estimated Cost
Lobby Dept of Home Affairs to provide customs & immigrations services, possibly from land border posts) to relevant airports	Eastgate, Musina, possibly Lephalale	LDRT	Short term	None (lobbying only)
Establish a working relationship between PIA and the Polokwane Civil Airport	PIA	GAAL	Short term	None (lobbying only)
Investigate the opportunity for GAAL to become involved at Eastgate to improve the chances of Eastgate to be able to offer customs & immigrations	Eastgate, PIA	GAAL	Short term	R200 000
Contact the identified airlines and start a process of negotiations about them operating the various identified routes, and conduct feasibility studies of the various routes for different scenarios	Eastgate	LDRT & Eastgate	Short term	R15 - 20 million
<b>Implement Safe Flying Limpopo Strategy:</b> <ul style="list-style-type: none"> <li>• Conduct research about status quo of airports &amp; airfields in the Province, including the fees they charge</li> <li>• Develop guidelines for airports &amp; airfields in Limpopo, including guidelines on appropriate landing and other fees</li> <li>• Source funding for implementing guidelines</li> <li>• Consult with local and district municipalities and private airfield owners to implement the guidelines</li> <li>• Consult with aviation support services stakeholders (e.g. Dept Home Affairs, ATNS)</li> <li>• Conduct customer service training where applicable</li> <li>• Maintain ongoing relationships with airports and airfields and establish a regular (bi-annual) forum for representatives from airports and airfields to meet and discuss various issues and to encourage closer relationships among the various airports</li> </ul>	All airports and airfields in the province, including both publicly and privately owned airfields	LDRT	Short to medium term	R50 million
Forge stronger relationship with Airlink and lobby them for: <ul style="list-style-type: none"> <li>• Lower fares on Polokwane and Phalaborwa routes</li> <li>• Competitive landing fees at Kruger Gateway airport</li> <li>• Operating routes from Polokwane to other SADC countries</li> </ul>	PIA, Kruger Gateway	LDRT	Short to medium term	R15 million

## Implementation Plan (cont.)

Action	Affected airports	Driver	Timeframe	Estimated Cost
Forge stronger relationship with SA Express and lobby them for: <ul style="list-style-type: none"> <li>• Lower fares on Hoedspruit routes</li> <li>• Operating routes from Polokwane to other SADC countries</li> </ul>	Eastgate, PIA	LDRT, Eastgate	Short to medium term	R10 million
Work with the Limpopo Dept of Tourism and Limpopo Tourism & Parks Board to ensure that any potential issues surrounding the charter flights for hunting packages are resolved.	Lephalale	LDRT	Short to medium term	R1 million
Establish a training academy for aviation support services at PIA: <ul style="list-style-type: none"> <li>• Identify skills needed in the aviation sector</li> <li>• Liaise with the University of Limpopo to provide the relevant certification</li> <li>• Develop training materials</li> <li>• Secure space at PIA</li> <li>• Recruit skilled trainers</li> <li>• Etc.</li> </ul>	PIA	GAAL	Medium term	R20 million
Establish Tzaneen as recognised training area for pilots: <ul style="list-style-type: none"> <li>• Engage with pilot training schools in Tzaneen and elsewhere in the Lowveld to establish themselves at Tzaneen</li> <li>• Establish relationships with accommodation establishments near the airport to provide reasonable rates for trainee pilots</li> <li>• Promote the available services among prospective pilots across South Africa</li> </ul>	Tzaneen	Tzaneen Airfield Board / Greater Tzaneen local municipality	Medium term	R2-3 million
Establish relationship with Limpopo Tourism & Parks Board to support their efforts to market Polokwane to the SADC countries by initially facilitating charter flights and later establishing routes from SADC countries to Polokwane	PIA	LDRT / GAAL	Medium term	R1 million
Develop and implement an online scheduling service for private and charter flights in the province that can make seats available to paying customers	All	LDRT	Medium term	R10 million
Participate in discussions about major events that will be held in Polokwane to assist in facilitation charter air access, and build relationships with various charter companies that may be able to assist	PIA	Dept of Roads & Transport / GAAL	Medium term	R1 million

## Implementation Plan (cont.)

Action	Affected airports	Driver	Timeframe	Estimated Cost
Contact the identified airlines and start a process of negotiations about them operating the various identified routes, and conduct feasibility studies of the various routes for different scenarios	PIA	LDRT, GAAL	Medium to long term	R25 - 30 million
Set up relationships with local taxi drivers to provide transfers to passengers and private pilots	Thohoyandou	Thohoyandou airport / local municipality	Medium to long term	None (lobbying only)
Establish Tzaneen as recognised general aviation support centre for the Lowveld, and Lephalale as a recognised general aviation support centre for the Waterberg: <ul style="list-style-type: none"> <li>• Conduct research to determine what type of aircraft is predominantly used in the Lowveld and in the Waterberg respectively;</li> <li>• Engage with and provide incentives to maintenance operations of these types of aircraft to establish themselves at Tzaneen or Lephalale;</li> <li>• Promote the available services among aircraft owners in the Lowveld and in the Waterberg</li> </ul>	Tzaneen, Lephalale	Tzaneen Airfield Board / Greater Tzaneen local municipality	Medium to long term	R5-6 million
Solicit existing large aircraft maintenance operations to move to PIA, or establish new maintenance operations specifically targeted at the maintenance of the types of aircraft used in SADC in order to secure contracts with SADC airlines	PIA	GAAL	Medium to long term	R3 million
Establish relationship with Eskom, Exxaro and Sasol for the development of Lephalale airport	Lephalale	Dept of Roads & Transport	Medium to long term	R20 million
Dependent on the development of the economy of Limpopo to produce high-value export produce, establish cargo facilities and a cargo hub linked to other modes of transport	PIA	Dept of Roads & Transport / GAAL	Long term	R10 billion



## Implementation Plan (cont.)

### Total estimated cost of implementing the strategy as per the implementation plan

- R10,19 billion (including cargo hub)
- R190,2 million (excluding cargo hub)

Airport	Estimated total cost to implement strategy
All (including airfields not specified)	R60 million
Polokwane International Airport	R69,6 million (ex cargo hub) R10 billion (cargo hub)
Eastgate Airport	R23,1 million
Lephalale Airport	R24 million
Kruger Gateway Airport	R7,5 million
Tzaneen Airfield	R6 million

## **Appendix A**

Visitor and aviation demand estimates by  
destination in Limpopo

## Appendix A – Visitor and aviation demand estimates by destination in Limpopo

### Visitors to National Parks

The figures below reflect the number of visitors (arrivals) to South African National Parks, but entrance gate, and also the projected number of visitors that could potentially use air travel to reach the Park.

Park / Gate (Kruger NationalPark)	Relevant airport	Total foreign visitors	Total domestic visitors	Total visitors	Estimated potential air travel users	# using airport
Pafuri Gate	Musina	1,768	16,011	17,779	500	500
Mapungubwe National Park	Musina	1,652	30,627	32,279	700	500
Punda Maria Gate	Thohoyandou	2,519	88,818	91,337	1,800	1,500
Phalaborwa Gate	Kruger Gateway	21,720	170,805	192,525	8,300	8,300
Marakele National Park	Lephalale	1,313	22,902	24,215	500	500
Orpen Gate	Eastgate	38,133	104,015	142,148	10,900	10,900

Source: SANParks & Grant Thornton estimates

## Appendix A – Visitor and aviation demand estimates by destination in Limpopo

### Visitors by destination

The figures below reflect the number of visitors (arrivals) – both same-day and overnight - to destinations within Limpopo that have an airport included in this study. The potential number of visitors that could potentially use air travel to these destinations have been estimated per annum and per day.

Local Municipality	Overnight visitors	Day visitors	Total visitors	Estimated potential air travel users	Avg # pax per day (arrivals only)
Polokwane	313,546	256,537	570,083	50,737	139.0
Musina	15,703	23,554	39,257	1,492	4.1
Thulamela	145,033	62,157	207,189	3,704	10.1
Maruleng	136,800	34,200	171,000	46,260	126.7
Lephalale	88,750	88,750	177,501	4,438	12.2
Greater Tzaneen	103,973	25,993	129,966	3,373	9.2
Ba-Phalaborwa	70,022	30,010	100,032	7,546	20.7
Greater Giyani	12,692	668	13,360	287	0.8
Greater Tubatse	17,520	1,947	19,467	1,071	2.9

Source: SANParks & Grant Thornton estimates

## Appendix A – Visitor and aviation demand estimates by destination in Limpopo

### Potential air travel users (arrivals only) by destination

The figures below reflect the number of visitors (arrivals) – both same-day and overnight - to destinations within Limpopo that have an airport included in this study. The potential number of visitors that could potentially use air travel to these destinations have been estimated per annum and per day.

Airport	Potential air travel users – visitors to National Parks	Potential air travel users – visitors to destination	Total potential air travel users (arrivals only)	Avg # pax per day (arrivals only)
Polokwane	N/A	50,737	50,737	139.0
Musina	1,000	1,492	2,492	6.8
Thohoyandou	1,500	3,704	5,204	14.3
Eastgate	10,900	46,260	57,160	156.6
Lephalale	500	4,438	4,938	13.5
Greater Tzaneen	N/A	3,373	3,373	9.2
Kruger Gateway	8,300	7,546	15,846	43.4
Giyani	N/A	287	287	0.8
Burgersfort	N/A	1,071	1,071	2.9

Source: SANParks & Grant Thornton estimates

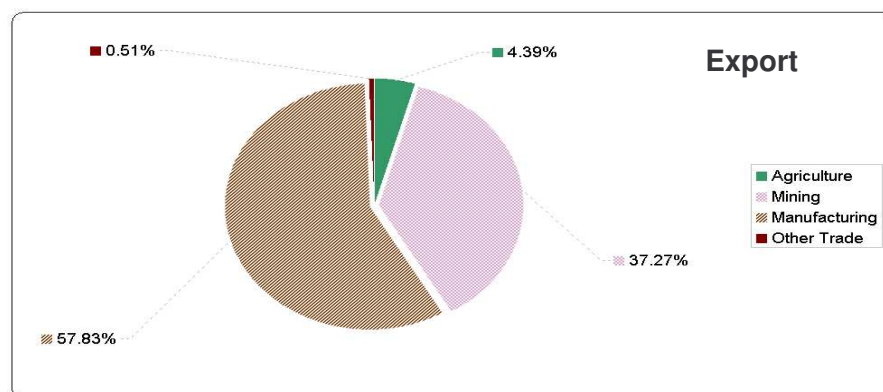
## **Appendix B**

### Freight in Limpopo

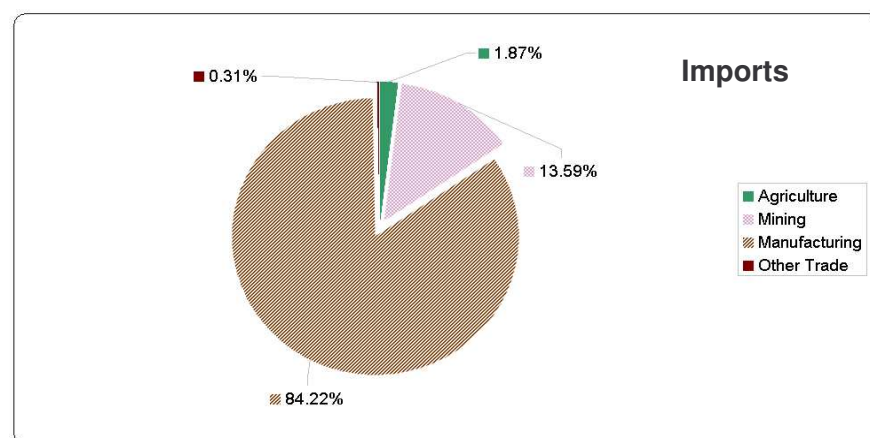
## Appendix B – Freight in Limpopo

### Overview of South African Trade

The figures below reflect the South African export and import markets by main category in 2009.



Source: [http://www.tips.org.za/files/Patrick\\_tips\\_final\\_Jan2010.pdf](http://www.tips.org.za/files/Patrick_tips_final_Jan2010.pdf)



Source: [http://www.tips.org.za/files/Patrick\\_tips\\_final\\_Jan2010.pdf](http://www.tips.org.za/files/Patrick_tips_final_Jan2010.pdf)

### Overview of South African Trade (cont.)

The majority of South Africa's imports and exports are in the mining and manufacturing categories, with a small percentage in agriculture. In searching for possible markets to focus air freight activities on, manufacturing is the most likely sector to focus on.

A large proportion of SA's imports come from countries that have a comparative advantage in the production of manufactured goods. Commodity-based economies in the rest of Africa and the Americas produce a relatively small proportion of SA's imports, while OECD2 countries, China and certain Asian countries with a comparative advantage in manufacturing, make up a significant proportion of SA's imports. Commodity-based economies in the rest of Africa and the Americas, by comparison, accounted for a relatively small proportion of South Africa's imports.

### Freight generation in Limpopo

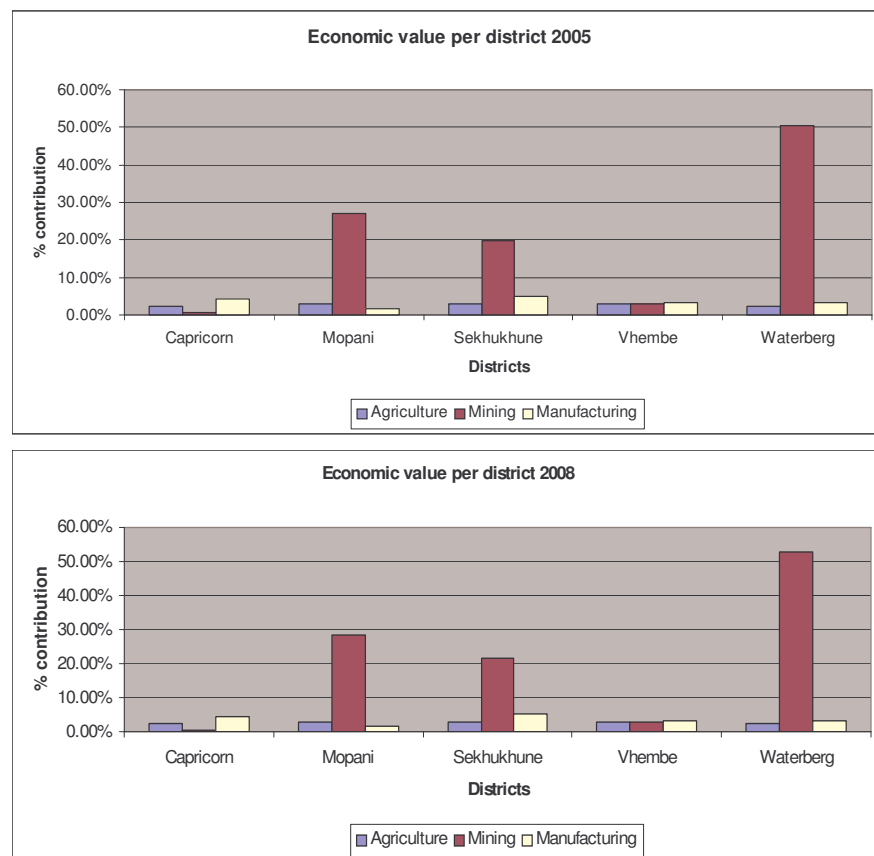
In attempting to identify the extent of possible air freight trade into and from Limpopo the sectoral contributions of the Province needs to be analysed further. This is done taken account of the general South African import and export patterns.

The agriculture, mining and manufacturing sectors form the basis of freight generation in the Limpopo economy.

## Appendix B – Freight in Limpopo (cont.)

### Freight generation in Limpopo (cont.)

The figures below reflect the economic value, by sector, of the five districts within Limpopo for 2005 and 2008.



### Freight generation in Limpopo (cont.)

It is evident that mining constitute the biggest contribution towards the provincial economy with a concentration of mining activities in Mopani, Sekhukhune and Waterberg. As far as manufacturing activities are concerned, Capricorn and Sekhukhune constitute the biggest contribution, while all districts make a small contribution to agriculture. Given that manufacturing in Limpopo will have to be the driving force in any air freight strategy, these graphs illustrate that the potential volumes may be low. Most of the mining freight (except possibly certain capital equipment) is transported by rail or road.

### Estimated volumes for Polokwane International Airport

Given the current situation in Limpopo, Polokwane International Airport is the only airport with international status in the province, which means that all international air freight will have to be flown from and into PIA.

The Situation Analysis Report estimated that there is a potential of about 38 400 tonnes of air freight in the province. This figure was based on many assumptions and is recognized to be on the optimistic (high) side, and does not necessarily represent all the air freight that could be flown from PIA, as some locations are closer to ORTIA and would rather transport their freight by road to ORITA from where it can be flown out. In respect of air freight, PIA is competing with ORTIA which is a recognised cargo hub in South Africa.

In estimating possible realistic air freight volumes the following methodology was adopted:

- We qualitatively assessed the main economic activities in the province and linked them to the South African Import and Export profile;
- We allocated the estimated air freight volume of 38 400 tonnes per annum to the various commodity types reflected in the Situation Analysis Report;



## Appendix B – Freight in Limpopo (cont.)

### Estimated volumes for Polokwane International Airport (cont.)

- According to the macro-economic analyses manufacturing is a major potential source for generating air freight, with agriculture less so. Therefore commodities classified under parcels/containers and other goods have been excluded from the analysis to derive an Adapted Freight Potential for Limpopo;
- Since not all air freight will be transported from PIA due to its proximity to ORTIA, an assumption is made about the retention of air freight in the province. For purposes of this report it has been assumed that PIA will be in a position to retain 60% of generated air freight.

### Estimated volumes for Polokwane International Airport (cont.)

The results of the Adapted Potential Freight Analysis for Limpopo Province by Commodity Type is reflected in the table below.

The table below shows that a more realistic estimate of possible air freight volumes for the province is just less than 6 000 tonnes. If it is assumed that PIA will be able to retain 60% of generated air freight the likely air freight volumes for PIA are estimated at 3 588 tonnes per year, which equates to about 45 flights by a dedicated 80-ton air freighter. This is less than 1 flight per week

Type of commodity	%	Limpopo volume (tonnes)	Adapted Limpopo volumes (tonnes)	PIA share (60%) (tonnes)
Livestock, fresh produce, and crops	4.33	1,663	1,663	998
Food, beverages and tobacco products	1.64	629	629	377
Textiles, clothing and leather products	2.34	899	899	540
Electrical machinery and apparatus, electronic communication and transport equipment	5.97	2,294	2,294	1376
Furniture	1.29	494	494	296
Parcels/containers	62.84	24,132	0	0
Other goods	21.58	8,288	0	0
<b>Total</b>	<b>100.00</b>	<b>38,400</b>	<b>5,979</b>	<b>3,588</b>

## Appendix B – Freight in Limpopo (cont.)

### Trade with SADC

Given the proximity of some of the SADC countries to Limpopo, which would indicate a possible origin and destination for air freight to and from Limpopo, an attempt was made to estimate likely air freight volumes from PIA to and from SADC countries. The basis for this analysis is the estimated PIA volumes of 3 588 tonnes per annum.

Although there is very little intra-SADC trade taking place, most countries trade more with South Africa than they do with the other member states. This is because South Africa is a source of virtually all products demanded by consumers in SADC. The country supplies the SADC region with products ranging from agriculture to domestically manufactured/assembled goods.

Exports to the region (2004) constituted 10% of South Africa's total exports but only 2.5% of its total imports. Trade with the region, therefore, was unbalanced. The un-balanced nature of the trade could possibly be ascribed to the fact that South Africa has good infrastructure to get products to the market, while SADC's relatively less developed infrastructure may inhibit their ability to access markets. South Africa also exported mainly higher value-added manufactured goods to the SADC region and imported, in turn, largely lower value, primary commodities.

Most of the imports into two categories:

- textiles, including cotton, from Zambia and Zimbabwe, and Malawian apparel; and
- mineral products such as petroleum products from Angola, nickel ores from Zimbabwe and Zambian copper.

Imports	Share of total imports from world (%)	Share of total imports from SADC (%)
C01: Live animals, animal products	0.7	0.8
C02: Vegetable products	1.6	4.0
C03: Animal or vegetable fats	0.8	0.1
C04: Prepared foodstuffs	2.0	4.9
C05: Mineral products	15.2	41.8
C06: Chemicals	9.1	0.9
C07: Plastics	3.7	0.8
C08: Leather	0.5	0.5
C09: Wood	0.6	2.4
C10: Wood Pulp and Paper	1.6	0.3
C11: Textiles	3.3	15.0
C12: Footwear	0.9	0.3
C13: Stone, Ceramics & Glass	1.2	0.4
C14: Precious metals	1.7	3.6
C15: Base metals	4.2	11.0
C16: Machinery	26.0	6.7
C17: Vehicles	13.4	3.7
C18: Scientific equipment	3.3	1.0
C19: Arms & ammunition	-	-
C20: Miscellaneous manufactures	1.4	1.0
C21: Art & Antiques	0.1	0.1
C22: Unclassified	0.1	0.7
C23: Special classification: Motor Parts	8.5	0.0
<b>H0: Total: all commodities (Rm)</b>	<b>306,368</b>	<b>7,554</b>

Source: <http://www.sadctrade.org/tpr/south-africa>

## Appendix B – Freight in Limpopo (cont.)

### Trade with SADC (cont.)

The two tables indicate that trade between South Africa and SADC with regards to high value goods (typically goods that can be transported by air) is fairly limited. Likely categories of trade include machinery, vehicles (maybe not to all the countries given their proximity to RSA) and prepared foodstuffs. The latter category offers possibly the best immediate potential for air freight, but it means that those exports will have to be taken away from ORTIA in order to export them from PIA.

Given the lack of basic information such as volumes it was necessary to utilize a number of assumptions in order to try and estimate potential air trade from Limpopo to SADC. These assumptions are:

- All SADC trade will be conducted from PIA and to PIA;
- The adapted volume of 3 588 tons per annum is used as the base volume;
- The Limpopo-SADC trade profile is the same as the South Africa-SADC trade profile, i.e. 10% is exported and 2.5% imported;
- The monetary trade values can be extrapolated to trade by volume. It is acknowledged that this assumption probably leads to an over-estimate of volumes, given the high value of air freight goods.

Based on these assumptions and the base PIA air freight volume of 3 588 tons it means that exports from Limpopo to SADC could be 358 tonnes (10%) and imports only 90 tonnes per annum.

Exports	Share of total exports to the world (%)	Share of total exports to SADC (%)
C01: Live animals, animal products	1.2	1.5
C02: Vegetable products	3.4	4.7
C03: Animal or vegetable fats	0.1	0.7
C04: Prepared foodstuffs	3.5	7.9
C05: Mineral products	11.8	16.5
C06: Chemicals	6.0	12.9
C07: Plastics	1.8	6.8
C08: Leather	0.5	0.1
C09: Wood	1.1	0.6
C10: Wood Pulp and Paper	2.2	4.1
C11: Textiles	1.7	2.1
C12: Footwear	0.1	0.2
C13: Stone, Ceramics & Glass	0.7	1.2
C14: Precious metals	27.4	0.2
C15: Base metals	19.6	14.0
C16: Machinery	8.2	16.9
C17: Vehicles	8.7	6.9
C18: Scientific equipment	0.5	1.4
C19: Arms & ammunition	-	-
C20: Miscellaneous manufactures	1.6	1.5
C21: Art & Antiques	0.0	0.0
C22: Unclassified	0.1	0.0
C23: Special classification: Motor parts	0.0	0.0
<b>H0: Total: all commodities (Rm)</b>	<b>291,129</b>	<b>24,911</b>

Source: <http://www.sadctrade.org/tpi/south-africa>

## Appendix C

### Cargo Hubs

## Appendix C – Cargo Hubs (cont.)

### Cargo Hubs

A logistics / cargo hub is designated area in which all logistics related activities are brought together to promote seamless supply chains – a one-stop logistic shop. Businesses tend to gravitate to these areas thus reducing travel costs and congestion. Typical activities performed at cargo hubs include the following:

- Warehousing;
- Cold storage facilities;
- Packaging;
- Freight forwarding;
- Container terminals, storage and repair;
- Truck stops and rest areas.

Without going into a detailed analysis of what cargo hubs, and air cargo hubs in particular, are all about, it is prudent to present some discussion on hubs in terms of their inherent requirements and factors that need to be in place in order for them to operate effectively.

### Requirements of Cargo Hubs

In a 2003 international survey of shippers by The International Logistics Quality Institute, 48% of 800 shippers surveyed said they are extremely concerned with customs practices. Customs can make or break time sensitive global supply chains. It is estimated that on average 20% of a goods transit time and 25% of costs are spent in / on customs clearance. Even though Customs primary purpose is to enforce controls, ineffective clearance procedures, serve as serious barriers to time critical delivery and country attractiveness for foreign investment and operations by time sensitive manufacturing industries.

Given this background the following general requirements should be observed at an air cargo hub:

### Requirements of Cargo Hubs (cont.)

- It should be located in a Special Economic Zone (Free Trade Zone) and should be an inland port;
- Reliability of operations (time);
- Excellent connectivity;
- Sufficient cargo capacity;
- Beneficiation and production facilities could be an advantage;
- High level ITS;
- Quality service;
- High cargo handling efficiency;
- Competitive total cost;
- Be close to its markets; and
- Competitiveness

Following from the above, a hub should have the following specific attributes:

### EU Certification for Perishables

Significant competitive advantage may be gained by building the facility to European Union standards for meeting the cold chain handling requirements for perishables and sanitary and phyto sanitary standards (SPS), and having it certified by the European Union. This may well be a key strategic factor for promoting the use of any hub facility.

### Direct Flights

Direct flights to destination are preferable unless circumstances indicate otherwise.

### Cost Effectiveness

The ability to achieve full loads in both directions is of utmost importance as someone will have to pay for “dead legging” or undercapacity flights.

## Appendix C – Cargo Hubs (cont.)

### Requirements of Cargo Hubs (cont.)

#### Intermodal Linkages

The facility must be networked to efficient surface transport networks with suitably designed multi-user intermodal terminals.

#### Cold Storage Facilities by Product Type

Different produce requires different handling equipment and storage facility requirements. The hub must provide in all these requirements.

#### Customs, SPS & Other Inspections

To speed the process and add value for the importer and exporter these facilities must be in the facility. Staff must be properly trained to allow speedy compliance with procedures.

#### Phased Design

The facility must be designed to allow for modular expansion concomitant with ability to handle demand.

#### Value Added Facilities

The hub must be able to provide additional value added services, such as packaging and other value added services.

#### State Of The Art Information Technology Systems

ITS is crucial to optimise productivity and provide clients with required information

The above discussion indicates that a cargo hub (whether it is an air cargo hub or a multi-modal hub) is not a small undertaking and would need a substantial infrastructure investment and even political will to make it a viable operation. An air cargo hub (similar to many ports in the world such as Melbourne, Australia) has to deal with unbalance freight, i.e a marked difference in incoming vs outgoing volumes. This would lead to a situation where “dead-legging” of aircraft may be involved (“dead-legging” is where aircraft fly one leg empty). This adds to the cost of freight.

### Air cargo in Limpopo

A problem that air freight in Limpopo has to contend with is the current lack of passenger movements by larger aircraft. As more than 80% of air freight is transported by passenger aircraft, the lack of available capacity on aircraft may be a problem for Limpopo and particularly PIA.

In order to make an air cargo a reality, a number of concurrent strategies have to be pursued as follows:

- Market research to firm up the target commodities and volumes that could use the hub;
- Trade facilitation initiatives to increase the competitiveness of the Polokwane Hub and its linkages to the regional and international markets;
- Logistics network design that is proactive and reactive to changing routes and pricing structures for different commodities;
- More comprehensive review of the liberalisation policies between South Africa and trade partners (especially SADC) in order to facilitate both charter and scheduled cargo services;
- Continuous monitoring of the environment particularly the development of other hubs in the region that will compete with the Polokwane Hub.

Establishing an air cargo hub at Polokwane International Airport will be slow and expensive process. There may be more merit in establishing a multi-modal hub in Polokwane with close links to the airport.