

# **THE NECESSITY FOR GAUTENG TO HAVE A THIRD INTERNATIONAL AIRPORT AND THE ENVISAGED IMPROVEMENTS AT WONDERBOOM AIRPORT TO FULFILL THIS ROLE**

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## **ABSTRACT**

**Wonderboom Airport is owned and managed by the City of Tshwane Metropolitan Municipality. The Airport has been established in 1939, and operated as an international Airport until 31<sup>st</sup> December 1999. From the 1<sup>st</sup> January 2000, National Government decided to reduce the number of points of entry into South Africa, and only 10 airports retained their international designation. Two of these airports are in Gauteng and one in each of the other eight provinces. Wonderboom Airport, Rand Airport and Grand Central Airport lost their status. The White Paper on National Policy on Airports and Airspace Management specifies criteria, which should be used to determine which airports could be named as designated airports as well as the conditions with which these nominated airports must comply before they can start operating as designated international airports.**

**This paper gives a brief outline why Gauteng should have a third international airport, discusses the criteria for airports to be designated and points out why Wonderboom Airport is indeed the superior choice to be designated as a third international airport. The paper concludes with Wonderboom Airport's development plan, which illustrates Council's endeavours to upgrade and develop Wonderboom Airport to supplement the services available at Johannesburg International Airport and Lanseria International Airport.**

## **1. INTRODUCTION**

Wonderboom Airport is owned and managed by the City of Tshwane Metropolitan Municipality. The Airport has been established in 1939, and operated as an international Airport until 31<sup>st</sup> December 1999. From the 1<sup>st</sup> January 2000, National Government decided to reduce the number of points of entry into South Africa, and only 10 airports retained their international designation. Two of these airports are in Gauteng and one in each of the other eight provinces. Wonderboom Airport, Rand Airport and Grand Central Airport lost their status. The White Paper on National Policy on Airports and Airspace Management specifies criteria, which should be used to determine which airports could be named as designated airports as well as the conditions, with which these nominated airports must comply before they can start operating as designated international airports.

## **2. CRITERIA FOR THE DESIGNATION OF INTERNATIONAL AIRPORTS**

For an airport, to be designated as an international airport, thus a point of entry into South Africa, there are certain criteria and requirements it must comply with.

The White Paper on National Policy on Airports and Airspace Management<sup>1</sup>, prescribes these criteria which are as follows:

- Economic activity, utilising traffic volumes as indicator;
- Geographical location;
- Physical constraints at existing airports;
- Aero-political considerations such as the need for provincial or regional and bilateral air services; and
- Safety and security.

Presently, Government is in a process to revisit the White Paper, which sets out National Policy, and the researchers were informed that additional focus would in future also be placed on the following criteria<sup>2</sup>:

- Economics of airports, airlines and service providers;
- New partnership for Africa's development (NEPAD); and
- Yamoussoukro Decision.

The White Paper further sets conditions, whereto nominated international airports must comply with, before they can start operating as designated international airports.

These conditions are:

- Adherence to the safety requirements;
- The airport must be licensed as an international airport;
- Provision of air traffic control services;
- Security systems as prescribed (perimeter fencing, restricted areas, access control, etc);
- An approved procedure for the facilitation of passengers and cargo has to be in place and should be adhered to at all times; and
- Hours of operation need to be clearly publicised. Designated airports cannot operate in an "unmanned-mode".

## **3. THE NECESSITY FOR GAUTENG TO HAVE AT LEAST THREE INTERNATIONAL AIRPORTS**

### 3.1 Population and Distribution of Economic Activity in South Africa

Figure 1 illustrates the population distribution in South Africa as well as the contribution of each province to the National Gross Value Added.

From the figure it is evident that 18,9% of the total population lives in Gauteng and they contribute 36,8% to the Country's economy. If three airports in Gauteng are designated with international status each Gauteng international airport will serve 12,3% of South Africa's GVA which is more than the Provincial GVA of six of South Africa's provinces. Only the GVA of the Western Cape and that of KwaZulu-Natal, which is respectively 17,4% and 13%, are higher.

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<sup>1</sup>National Department of Transport, March 1998, White Paper on National Policy on Airports and Airspace Management, p23.

<sup>2</sup>National Department of Transport, October 2003, Draft Green Paper on National Aviation Policy, p35.

### 3.2 Traffic Volumes at the Existing Two International Airports

Johannesburg International Airport is presently the busiest airport in Africa and Lanseria is in terms of aircraft movements the second busiest airport in South Africa.

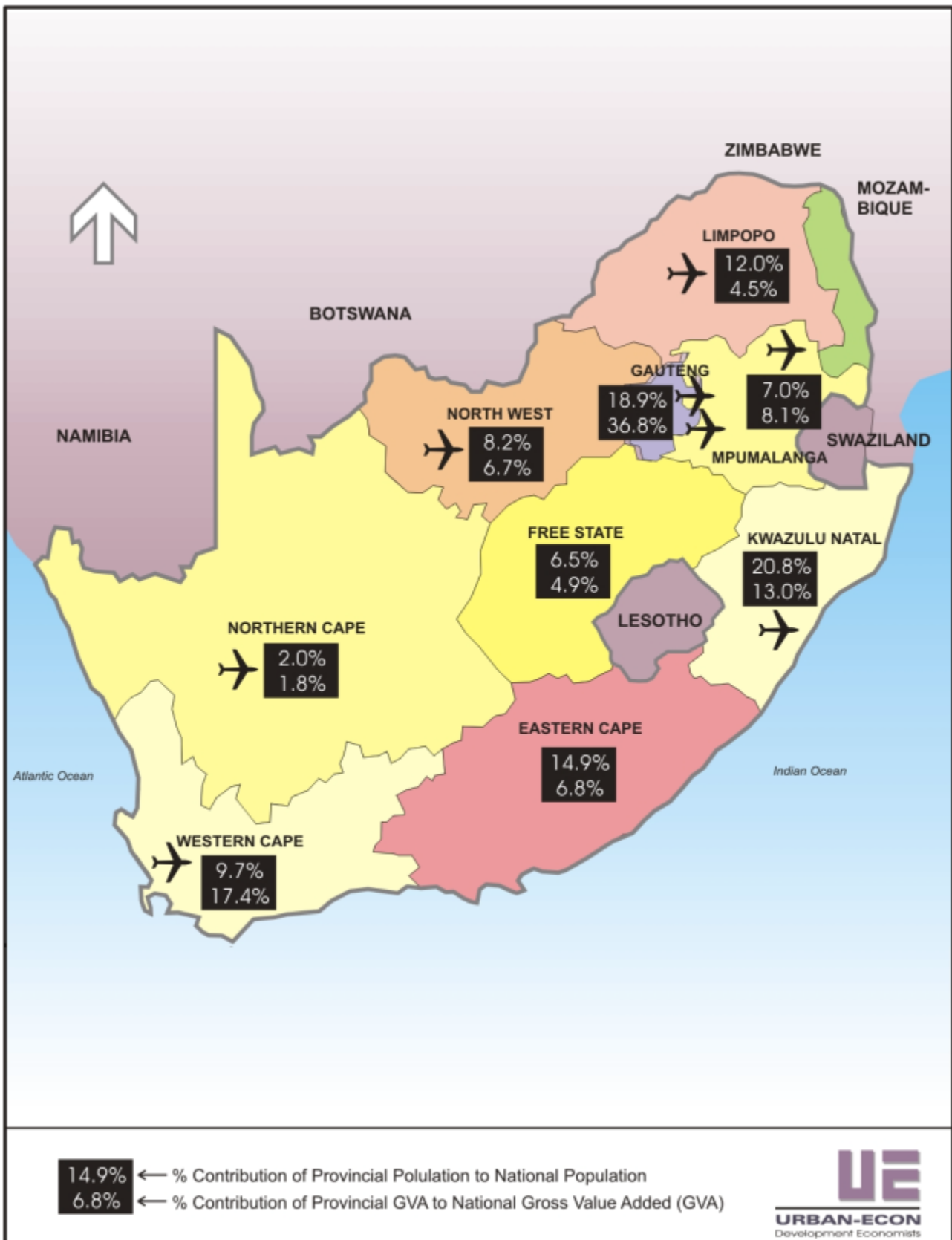
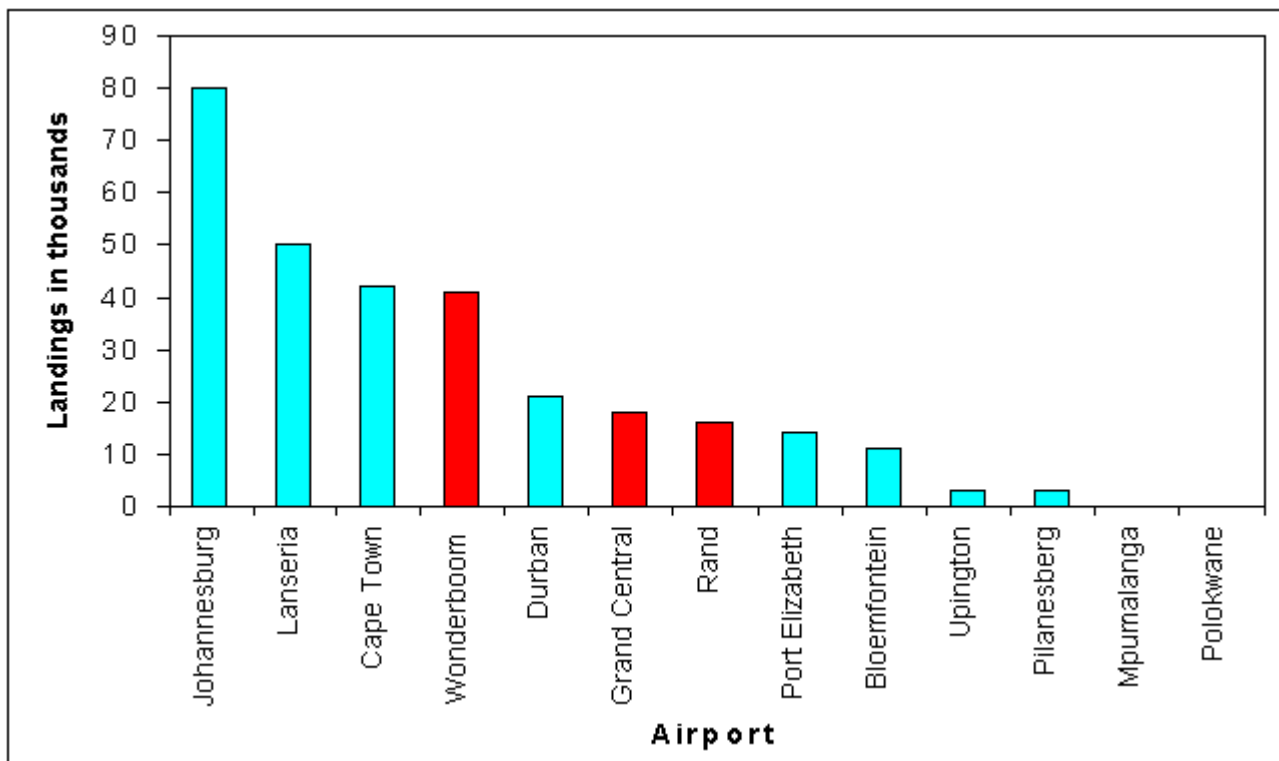


Figure 1. International Airports in South Africa.

### 3.3 Certain Gauteng Non-International Airports Handle More Flights Than Some International Airports

Graph 1 indicates the number of aircraft movements recorded at the ten international airports in blue and the number of aircraft movements recorded on the other three main airports in Gauteng, which lost their international designation.



**Graph 1. Landings at Airports in 2002.**

From the above graph it can be noted that in terms of aircraft movements five of the seven busiest airports in South Africa are located in Gauteng.

### 3.4 Passenger Volumes at Gauteng Airports

Gauteng presently handles 43% of all domestic passengers and 83% of all international passengers entering South Africa. From the above it can be deduced that the trips of only 14% of all domestic passengers do not originate or end in Gauteng. The remainder of all domestic flights are between Gauteng and other destinations. In connection with international passengers 83% arrives in South Africa at Johannesburg International Airport and 15% at Cape Town International Airport. Airlines thus have very little choice regarding the airports they intend to use.

### 3.5 Number of Aircraft Registered in Gauteng

Presently 65% of all registered aircraft in South Africa are based in Gauteng, whilst only 35% are based in the other eight provinces.

### 3.6 Monopolistic Nature of Existing Airports

Johannesburg International Airport predominantly serves the scheduled market with larger type of aircraft and Lanseria serves unscheduled operations with smaller type of aircraft. These two airports are therefore not really in competition with each other, and because of their international status they will furthermore not have much competition from certain other airports with regard to most international flights.

There are many examples and studies that have shown that good competition in a free market situation actually stimulates growth. It is argued that a third international airport in Gauteng will in fact stimulate both the aviation and tourism industries creating higher volumes than if only the existing international airports are there.

### 3.7 A Third International Airport Will Provide a Wider Choice and Flexibility

As pointed out above the present airport user at the two airports do not have much of a choice with regard to certain services, e.g. international general aviation users may not have much of a choice but to use Lanseria, unless they want to pay more landing fees and time costs by first passing customs and immigration before flying to their home-base airport, which is without international status. At JIA airlines do not have an alternative if the slots, facilities and other services do not suite them ideally. A third international airport for Gauteng, the economic hub of South Africa, will provide a more flexible aviation/airport system for Gauteng with a larger choice for airport users.

### 3.8 Johannesburg International and Lanseria Experience the Same Weather Conditions

Both airports experience similar weather type patterns with regard to rain, mist, hail, air pollution etc. Weather conditions north of the Magaliesberg differ from those experienced at JIA and Lanseria. If Johannesburg experiences adverse weather, Lanseria would most probably also be affected, whilst Wonderboom Airport might not be affected. Therefore should a third international license be granted to Wonderboom Airport it could be used as a deviation airport for all aircraft presently being used for regional and domestic flights in South Africa.

### 3.9 Elevation

The elevation of Johannesburg International Airport is 5 558 feet compared to 4 095 feet at Wonderboom Airport. Aircraft would thus require a shorter runway and burn less fuel to take-off from Wonderboom Airport.

### 3.10. Airspace Limitations

The majority of airports in Gauteng fall in the Johannesburg TMA and influences JIA's capacity. Wonderboom Airport can operate independently from JIA

## **4. WONDERBOOM AIRPORT'S COMPLIANCE TO THE CRITERIA**

### 4.1 Economic Activity, Utilising Traffic Volumes as Indicator

In the previous section it has already been pointed out that Wonderboom Airport is the busiest non-international airport in Gauteng. In actual fact in terms of aircraft movements it is the fourth busiest airport in South Africa.

Figure 2 gives an indication of the high economic production zones in Gauteng. Superimposed on this map is a 15 and 20 km radius drawn from the three largest airports.

Evaluating Tshwane in greater depth, it is interesting to note that 30% of Gauteng's middle to upper income population lives within a 25km radius of Wonderboom Airport, 30% of Tshwane's population has at least matric or a higher education and Tshwane contributes 27,5% of the total economic activity in Gauteng. Tshwane's economic growth is faster than the average economic growth in the Province and it is estimated that this percentage will increase to 28,3% by 2007. More importantly, origin destination studies revealed that the trips of 30% of all the passengers presently using JIA originates in Tshwane. The most likely growth scenario for Wonderboom Airport is based on an assumption that 25% of these passengers will in future use Wonderboom Airport, should a reliable scheduled service be available from it. In the optimistic scenario, 40% of these passengers will use Wonderboom Airport. If a second assumption is made that the traffic will grow at 5,5% per annum, which is in line with IATA's outlook for southern Africa, Wonderboom Airport needs to process 560 000 scheduled departing passengers to Durban and Cape Town in the year 2024 in the

most likely scenario and 1,3 million in the optimistic scenario. A comparison between these figures and present traffic volumes at South African airports revealed that in the most likely traffic growth scenario Wonderboom Airport may in 20 years' time process the same number of passengers Port Elizabeth Airport is presently handling. In the optimistic scenario it will be as busy as a present Durban International Airport.

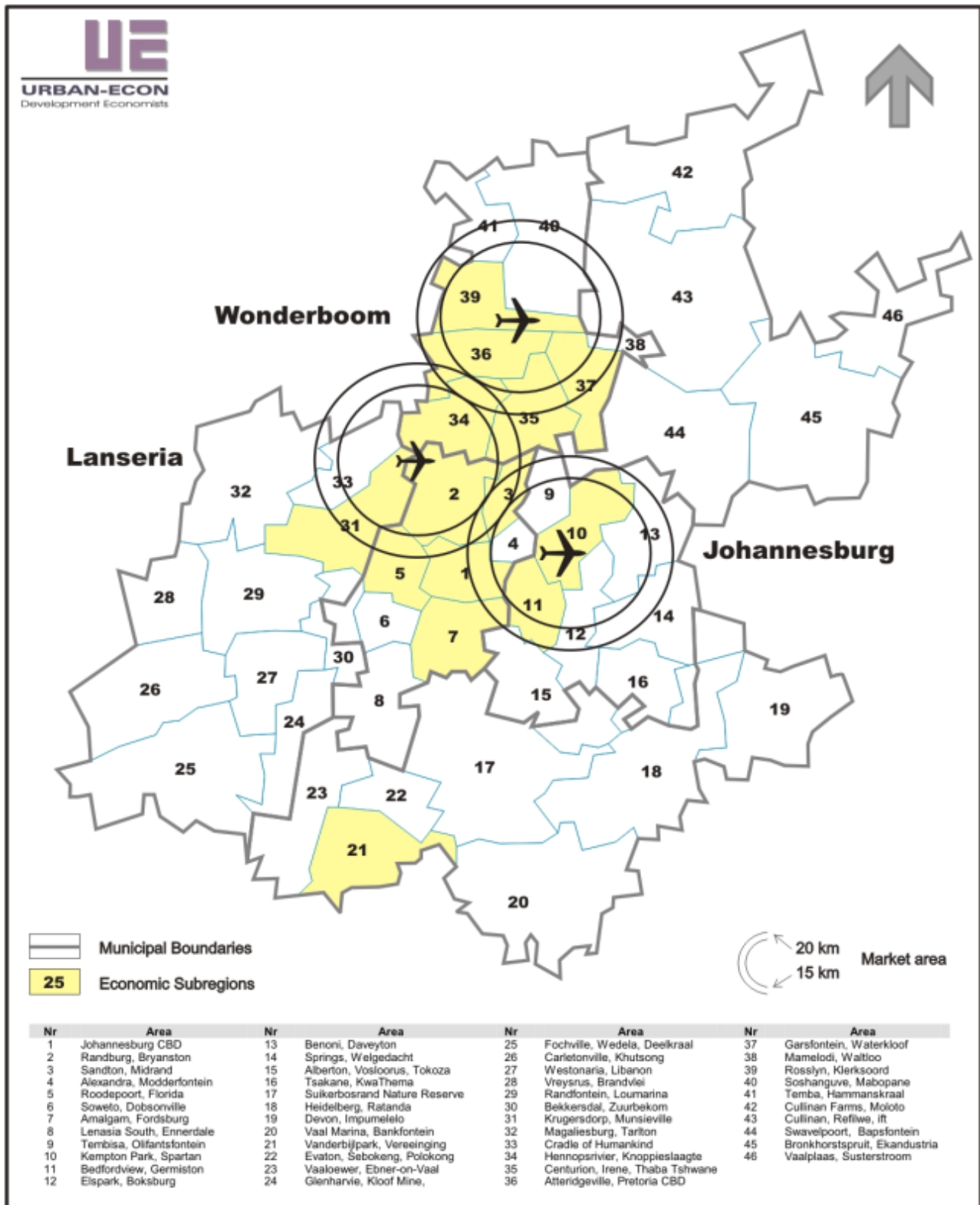


Figure 2. High economic production zones within Gauteng.

#### 4.2 Geographical Location

Wonderboom Airport is located within 10 minutes drive from Tshwane's CBD. Wonderboom is very accessible both by rail and road. Two of South Africa's busiest freeways, the N1 and N4, intersects close to the Airport. Provision has been made in the construction of the N4, for an offramp serving the old Tshwane-Bela Bela road (K97) which in turn feeds directly into the airport. This interchange has already been partly constructed. The travelling time from Moreleta Park/Elardus Park which is in a south-eastern direction, the suburbs which are the closest to JIA and the furthest from Wonderboom Airport, is only a 20-minute drive to Wonderboom Airport, compared to a 40-minute journey to either JIA or Lanseria Airport.

From Figures 1 and 2 it should be noted that Gauteng is the driving economic hub of South Africa and southern Africa. Furthermore, the northern sector of the Province is not well served by an international airport. Granting an international designation to Wonderboom Airport, will support the economic base of the Tshwane Metro and the industrial areas of Tshwane including the automotive cluster, which produces 42% of all cars being sold in South Africa.

Wonderboom Airport is the first major airport aircraft will pass after entering Gauteng airspace. It is thus the obvious choice for an international airport. From an airspace control point of view, it is outside the congested JIA terminal maneuvering area and an increase in operations at Wonderboom Airport will not influence that at JIA. It has also been pointed out above; weather conditions at Wonderboom Airport differ from those experienced in the Witwatersrand area.

#### 4.3 Physical Constraints at Existing Airports

A few constraints at the other main airports or planned airports are as follows:

- JIA is presently been operated at capacity and slots are not freely available during peak periods. Therefore the charter market can not use JIA effectively. JIA also has a definite niche market. It has been developed for larger aircraft and doubt exists if it could accommodate small aircraft in a cost-effective way.
- Access to Lanseria is poor; there are no major hospitals close to the airport to position it suitable for emergency operations, the usage is influenced by JIA and it experiences similar weather conditions than JIA.
- Dunnottar is a new airport that is planned to be developed in the East Rand. The cost to develop this airport compared to the cost to upgrade Wonderboom Airport will be excessive. Concluding this airport is too far from the market it is intending to serve.
- Grand Central airport has already been developed up to its maximum potential and can not be upgraded to serve larger aircraft types being used on scheduled flights. Its capacity is also influenced by JIA and experiences similar weather patterns than JIA.
- Rand Airport is too close to JIA to be developed as a major airport supplementing JIA's services. Access to Rand is also poor and it also experiences similar weather conditions than JIA.

From the above it can be noted that there are constraints at the existing airports in Gauteng. Wonderboom Airport is in an ideal position to supplement the services being offered at the existing two international airports.

#### 4.4 Aero-Political Considerations Such as the Need for Provincial or Regional and Bilateral Air Services

Tshwane is the Capital City of South Africa yet it needs to depend on neighbouring cities for airport facilities. The majority of diplomatic consulates are housed in Tshwane as well as the United Nations Transition Assistance Group (UNTAG) and the World Trade Federation. The vision statement of the City is *"To become the leading international capital city of excellence that empowers the community to prosper in a safe and healthy environment"* In order to fulfil this mission it is of paramount importance that Tshwane can communicate effectively with it's

neighbouring countries. The designation of Wonderboom Airport can play a meaningful role in this regard.

From an aero political point the designation of Wonderboom Airport as an international port of entry should have the following advantages:

- Provides airport users a larger choice and flexibility.
- It will stimulate investment in Tshwane, economic growth and employment creation.
- It could serve areas with large unemployment and upliftment needs. In this regard the north-western part of Tshwane consists of the most densely populated area in the former Bophuthatswana. In this area 681 000 people are living, consisting of an estimated 145 000 households. The development of the airport with all its associated development around it will provide a large number of employment opportunities to these people and assist with their upliftment.
- A third international airport could also support the establishment of an IDZ and enhance further industrial development in the Rosslyn Klerksoord area.
- The Airport development will support government policy in respect of the moving South Africa Policy, The White Paper on National Transport Policy and the National Policy on Airports and Airspace Management.

#### 4.5 Safety and Security

Wonderboom Airport presently complies with all the requirements, required for an airport to serve general and corporate aviation. It has a new perimeter fence, the air and landside is separated and management is in a process to install an access control system with CCTV monitoring.

#### 4.6 Economics of Airports, Airlines and Service Providers

In Section 3.3 it has been pointed out that Wonderboom Airport is already accommodating more traffic than six of the other airports to whom international status was granted. Should Wonderboom's designation be approved it will start operating as the fifth busiest international airport in South Africa. It should further be noted that KPMG did a financial study that included a management plan for the airport as part of Wonderboom Airport's Development Plan. At present Wonderboom Airport is being managed as a ringfenced organisation inside the CTMM, which is not being cross-subsidised.

#### 4.7 New Partnership for Africa's Development (NEPAD)

Wonderboom Airport's application for international status, aligns itself with the New Partnership for Africa's Development (NEPAD's) objectives of economic and social development, through attracting foreign investment and stimulating trade between South Africa and other African countries. The NEPAD strategic framework document arises from a mandate given to the five initiating Heads of State (Algeria, Egypt, Nigeria, Senegal, and South Africa) by the Organisation of African Unity (OAU) to develop an integrated socio-economic development framework for Africa.

The upgrading of Wonderboom Airport to international status has the potential to meet many of these objectives in the following ways:

- Attracting foreign investment;
- Stimulation of trade between South Africa and African countries;
- Serve the diplomatic missions in Tshwane; and
- Strive towards Tshwane's mission statement.

#### 4.8 Yamoussoukro Decision

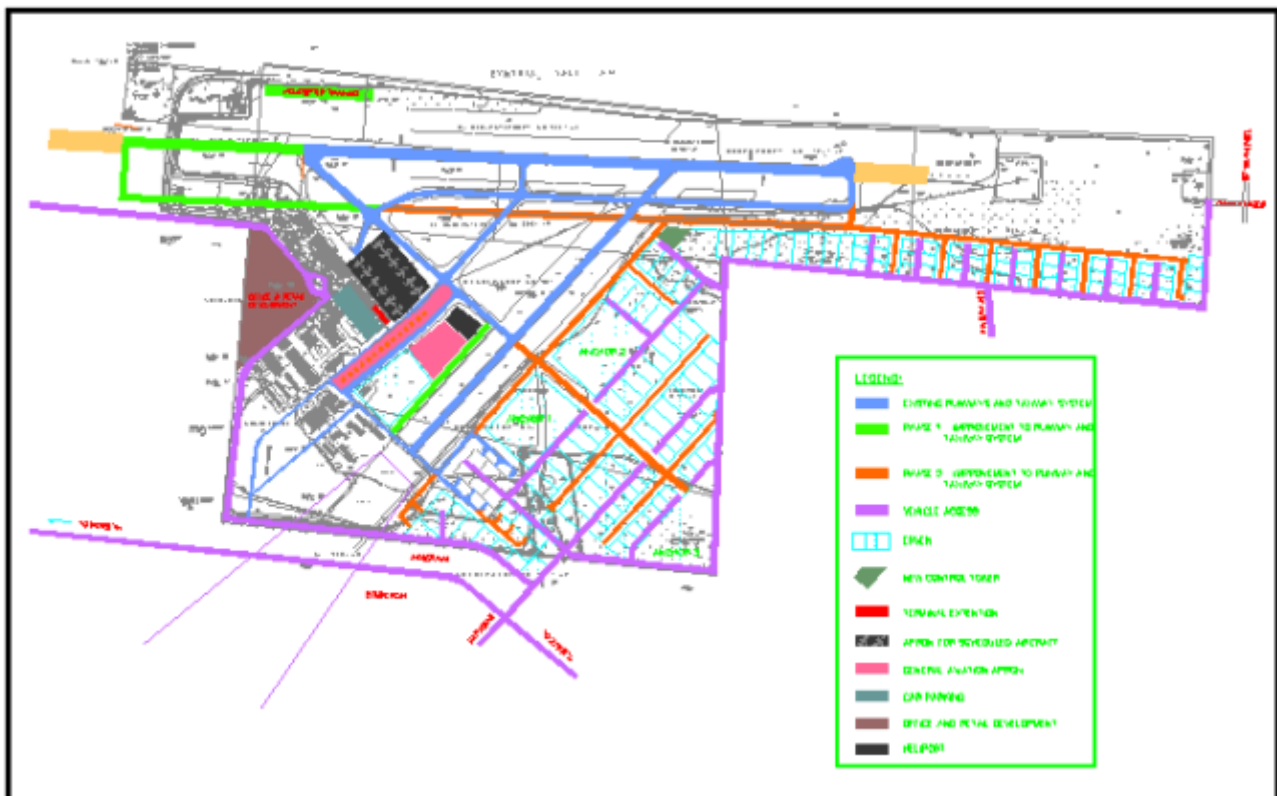
The Yamoussoukro declaration was signed by 29 African aviation ministers in November 1999, and has since been ratified by the African Union. This declaration called for effective liberalisation of air transport on the continent, and opened the way for airlines in Africa to start operating more



independently, without the strict governance as set out in various present bilateral agreements. In this regard, granting international status to Wonderboom Airport should also have the advantage for other African Carriers that they do not have to land on JIA in future. This would stimulate competition, which is very good for the industry.

## 5. WONDERBOOM AIRPORT'S DEVELOPMENT PLAN

The development of the Wonderboom Airport entails transforming the Airport, which is a strategic asset of the City of Tshwane from a small airport serving mainly the general aviation market into the second largest international Airport in Gauteng or the fourth largest Airport in South Africa. Three key performance areas have been identified to develop the airport. The first entails upgrading Wonderboom Airport to serve the domestic scheduled market, the second to re-gain Wonderboom Airport's international designation and introduce regular flights to neighbouring states and the third to service and provide additional stands to increase the available facilities for general aviation.



**Figure 3. A Development Plan for Wonderboom Airport.**

### 5.1 Upgrading Wonderboom Airport for Scheduled Domestic Flights

The main activities endeavoured includes:

- Obtain additional land to the west to lengthen the runway and rezone it from agricultural usage to airport usage.
- Environmental impact assessment (EIA). In this regard an opportunities and constraints analysis has already been done which indicated that the environment and airport could sustain such a development.
- Lengthening the main runway. It is planned that the runway will be lengthened with 600 m to 2 400 m. At Wonderboom Airport's elevation this length is adequate for a Boeing 737-800 and MD 82's to take-off with a full passenger load to Cape Town.
- Redevelopment of the main apron. Adequate stands will be provided on the main apron for these larger aircraft.

- Relocating and developing a modern control tower. Due to the location of the terminal building it is not possible to see the new threshold 11, once the runway is lengthened. Secondly, by relocating the tower close to the intersection of the main and secondary runways the necessary land is freed that is required for the terminal building extension.
- Refurbishing of the terminal building to accommodate scheduled operations.
- Improving security systems to comply with all the requirements for scheduled operations.
- Procuring ground service equipment.
- Introducing scheduled operations from Wonderboom Airport.

### 5.2 Re-Obtain International Designation

The main activities to re-obtain international status have been discussed in Section 4 of this paper. Wonderboom Airport is already being operated to comply with the majority of conditions whereunder international airports need to be operated.

Airport management will revisit the following conditions and make the necessary alterations to ensure that the airport complies thereto:

- Adherence to the safety requirements;
- The airport must be licensed as an international airport;
- Provision of air traffic control services;
- Security systems as prescribed (perimeter fencing, restricted areas, access control, etc);
- An approved procedure for the facilitation of passengers and cargo has to be in place and should be adhered to at all times; and
- Hours of operation need to be clearly publicised. Designated airports cannot operate in an “unmanned-mode”.

### 5.3 Upgrade the Existing Airport Facilities

The third niche market on Wonderboom Airport is supporting the airport users who supported the airport over the last 65 years. In this regard the following improvements are envisaged:

- Develop facilities to attract major anchor tenants;
- Service additional stands for operators;
- Develop residential airport park;
- Develop office and retail facilities; and
- Upgrade access and other supporting infrastructure.

## **6. CONCLUSION**

The City of Tshwane is committed to develop Wonderboom Airport into a major airport in Gauteng, supplementing the services of Johannesburg International Airport and Lanseria International Airport. Parties interested in participating in this endeavour are welcome to contact the author of this document or Mr Hendrik Kleynhans tel (012) 337 4446 at the City of Tshwane.