



## **DRAFT SCOPING REPORT**

**REFERENCE GAUT 002/12-13/E0220**

**PROPOSED RESIDENTIAL  
DEVELOPMENT IN WINTERVELD EXT  
5, SOSHANGUVE, GAUTENG**

**Prepared for the City of Tshwane  
Metropolitan Municipality**

**June 2013**



**PROPOSED RESIDENTIAL DEVELOPMENT IN WINTERVELD EXT 5,  
SOSHANGUVE, GAUTENG**

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Author	Dr J Bothma
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- City of Tshwane Metropolitan Municipality
- Maluleke Luthuli Development Planners (Pty) Ltd

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# EXECUTIVE SUMMARY

## INTRODUCTION

This Scoping Report has been compiled and distributed for comment as part of an Environmental Impact Assessment (EIA) Scoping Study that is being undertaken for the proposed residential development in Winterveld ext 5 in Soshanguve, Gauteng. This report presents additional information to that given in the Background Information Document and presents the findings of the Scoping Study to date.

The role of this Environmental Scoping Report (ESR) is to detail the findings of the Environmental Scoping Study (ESS) in a clear and concise manner, thereby giving both the authorities and the public the opportunity to review these findings. The goal of the ESS is to identify and assess the potential environmental impacts associated with the proposed residential development in Winterveld.

## DESCRIPTION OF PROPOSED ACTIVITY

The activity entails the following:

- The establishment of a township, to be known as Winterveld ext 5 on holdings 1418 to 1472, 1541 to 1570 and 1573 to 1589, Winterveld Agricultural holdings, Extension 1.
- The total area of development including the stands and streets are 442.15 ha in extent comprising 6463 erven.
- The development includes houses, streets, schools, sports fields, community centres, educational facilities and businesses. The zonings are as follows:

ZONING	ERVEN
Residential 5 (houses)	6400 erven
Residential 3 (508 units)	4 erven
Shops	16 erven
Educational (Schools & Creche)	10 erven
Institutional (Community Centres & Churches)	10 erven
Infrastructure Works (Eskom Substation)	2 erven
Parks (parks and agriculture)	19 erven
Sportsfields	2 erven
TOTAL	6463 erven

The conceptual layout of the proposed development is attached as Annexure A.

## **POTENTIAL IMPACTS ASSOCIATED WITH DEVELOPMENT**

The potential impacts associated with the establishment of proposed development have been identified as the following:

- Aquatic and wetlands;
- Flora and Fauna;
- Archaeological and heritage impacts;
- Construction impacts (dust, noise, crime, traffic, waste, soil erosion and water pollution);
- Traffic.

### ***Positive Impacts:***

Potential positive impacts associated with the proposed project include the following:

- Employment creation during construction and operation;
- Informal energy sources are replaced with formal electricity that will eradicate wood and coal burning stoves;
- The settlement will now have access to services such as water supply and sewerage removal;
- Pit latrines will be eradicated.

## **SPECIALIST STUDIES**

Two specialist studies were undertaken to assist with the layout of the proposed development. The studies are:

- Faunal, Floral and Wetland Ecological Assessment for the Proposed Winterveld Extension 5 Development, Soshanguve, Gauteng undertaken by Scientific Aquatic Services (Annexure D);
- Traffic Impact Study report undertaken by Corli Havenga Transportation Engineers (Annexure D).

Both studies were taken into account with the final layout of the proposed development. The wetland delineation study assisted with identifying the wetlands in the area that need to be taken into account with the development. The recommendations in the study were taken into account with the layout of the proposed development.



## **ADDITIONAL SPECIALIST STUDY**

### **Archaeology**

A specialist heritage and archaeological assessment will be undertaken by Dr J van Schalkwyk in the Impact Assessment phase to assess the potential heritage and archaeological impacts associated with the project.

## **CONCLUSION**

The main issues raised in this phase of the environmental investigation are the following possible impacts:

- Aquatic and wetlands;
- Flora and Fauna;
- Archaeological and heritage impacts;
- Construction impacts (dust, noise, crime, traffic, waste, soil erosion and water pollution);
- Traffic.

Two specialist studies were already undertaken to assist with the layout of the proposed development. The studies are:

- Faunal, Floral and Wetland Ecological Assessment for the Proposed Winterveld Extension 5 Development, Soshanguve, Gauteng undertaken by Scientific Aquatic Services (Annexure D);
- Traffic Impact Study report undertaken by Corli Havenga Transportation Engineers (Annexure D).

Both studies were taken into account with the final layout of the proposed development. The wetland delineation study assisted with identifying the wetlands in the area that need to be taken into account with the development. The recommendations in the study were taken into account with the layout of the proposed development.

Potential positive impacts arising out of this proposed development include possible employment creation through the construction and operational phases, informal energy sources will be replaced with formal electricity that will eradicate wood and coal burning stoves; the settlement will now have access to services such as water supply and sewerage removal and pit latrines will be eradicated.

Specific terms of reference, describing the extent of the study required, will be set for the following disciplines in the next phase of the EIA:

- Archaeology.

In terms of the process to be followed, I&APs will be involved throughout the EIA phase and comments on or requirements in regard to this process will be incorporated into planning of that process. The need for public involvement throughout the process into the management planning and design stages has been identified and will be incorporated into further recommendations or processes.

## **CHAPTER 1**

Provides a description of the project and motivation, information on the applicant and EAP, expertise of EAP to perform a Scoping exercise, terms of reference, information on the regulating authority and the structure of the Scoping Report.

### **1.1 INTRODUCTION**

This Scoping Report has been compiled and distributed for comment as part of an Environmental Impact Assessment (EIA) Scoping Study that is being undertaken for the proposed residential development in Winterveld ext 5 in Soshanguve, Gauteng. This report presents additional information to that given in the Background Information Document and presents the findings of the Scoping Study to date.

The role of this Environmental Scoping Report (ESR) is to detail the findings of the Environmental Scoping Study (ESS) in a clear and concise manner, thereby giving both the authorities and the public the opportunity to review these findings. The goal of the ESS is to identify and assess the potential environmental impacts associated with the proposed residential development.

### **1.2 DESCRIPTION OF PROPOSED ACTIVITY**

The activity entails the following:

- The establishment of a township, to be known as Winterveld ext 5 on holdings 1418 to 1472, 1541 to 1570 and 1573 to 1589, Winterveld Agricultural holdings, Extension 1.
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<b>ZONING</b>	<b>ERVEN</b>
Residential 5 (houses)	6400 erven
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Business 1	16 erven
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<b>ZONING</b>	<b>ERVEN</b>
Churches)	
Infrastructure Works (Eskom Substation)	2 erven
Parks (parks and agriculture)	19 erven
Sportsfields	2 erven
<b>TOTAL</b>	<b>6463</b>

The conceptual layout of the proposed development is attached as Annexure A.

### **1.3 PROJECT NEED AND DESIRABILITY**

Winterveld and Soshanguve is an important residential growth area in the northern part of Pretoria. Surveys undertaken by the City of Tshwane Metropolitan Municipality identified the most severe pockets of poverty among the urban poor, refugee camps, and remote rural areas suffering the triple ravages of low investment, recession and drought. The links between rapid urbanization, rural urban migration and pockets of urban poverty are clear. The urban poor often lack adequate access to health, water, sanitation, and other basic services whether due to their own economic limitations or to the inability of municipal services to keep up with the rapid and spontaneous expansion of peri-urban informal settlement belts.

The need for development of the northern part of the City of Tshwane has been identified by the Municipality and is an important part of its present development strategy and this development will alleviate the backlog in housing and other basic services in the area.

### **1.4 APPLICANT**

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Contact person: Dr Jenine Bothma

### **1.5.1 Expertise of EAP**

Dr Bothma is certified as an Environmental Assessment Practitioner with the Interim Certification Board for Environmental Assessment Practitioners of South Africa and has 24 years' experience in the environmental field.

## **1.6 TERMS OF REFERENCE**

Chameleon Environmental Consultants was appointed as independent assessment practitioners by Maluleke Luthuli Development Planners (Pty) Ltd to investigate the environmental impacts associated with this proposed project.

The overall terms of reference for this report are to identify and advise Maluleke Luthuli Development Planners (Pty) Ltd about the potential environmental impacts (both positive and negative) of the development and the implications for the design and environment.

### **1.7 Regulating Authority**

The Gauteng Department of Agriculture and Rural Development (GDARD) is the relevant decision-making authority regarding this application. The relevant official at the Department is Ms Faith Mlambo.

The application form was lodged with the GDARD on 6 December 2012. An acknowledgement of receipt from the Department was received on 16 January 2013. The reference number for the project is Gaut 002/12-13/E0220.

## **1.8 ASSUMPTIONS AND LIMITATIONS**

### **1.8.1 Assumptions**

The following assumptions have been made for the purposes of this report:

- All information received from sources contributing to this project is correct;
- That Maluleke Luthuli Development Planners (Pty) Ltd would consider the recommendations derived from this study, and
- That the GDARD would be the decision making authority with regard to this project.

## 1.8.2 Limitations

- Limitations will be included in the specialist reports.

## 1.9 Structure of the Scoping Report

This report consists of 6 Chapters, the contents of which are outlined in the table below.

Table 2: Structure of the Scoping Report

<b>CHAPTER</b>	<b>CONTENTS</b>
Executive Summary	Provides an overview of the Scoping Report.
Chapter 1	Provides a description of the project and motivation, information on the applicant and EAP, expertise of EAP to perform a Scoping exercise, terms of reference, information on the regulating authority and the structure of the Scoping Report.
Chapter 2	Provides a description of the development, description of receiving environment, positive project benefits and alternatives identified.
Chapter 3	Covers the approach and methodology of the Scoping Study in the legislative context.
Chapter 4	Provides a description of the environmental issues identified, methodology to be adopted in assessing the potential impacts and proposed specialist studies to be undertaken.
Chapter 5	Provides a description of the public participation process.
Chapter 6	Draws conclusions and makes recommendations on the way forward.

## CHAPTER 2

Provides a description of the area and services, description of receiving environment, positive project benefits and alternatives identified.

### 2.1 DESCRIPTION OF THE AREA AND SERVICES

The following provides a description of the property on which the activity is to be undertaken and the location of the property:

#### 2.1.1 Local Authority

The applicable local authority for this development area is the City of Tshwane Metropolitan Municipality. They are also the applicant for this development.

### **2.1.2 Locality**

Winterveld Extension 5 will be situated on Holdings 1418 to 1472 and 1541 to 1589 Winterveld Agricultural Holdings Ext 1 located in the north-western side of the City of Tshwane Metropolitan area.

The locality of the township is shown on the attached locality map in Annexure A.

### **2.1.3 Availability of Engineering Services**

Sufficient potable municipal water is available to provide water to the proposed development. The Water would be supplied from the Mabopane Main Reservoir.

The sewer will drain to the Rietgat Waste Water Treatment Works. The Annual Average Daily Demand (AADD) and Peak Flows are attached.

The electricity will be supplied by the City of Tshwane Metropolitan Municipality.

### **2.1.4 Existing Zoning**

Holdings 1418 to 1472 and 1541 to 1589 Winterveld Agricultural Holdings Ext 1 is zoned "Agricultural" in terms of the Pretoria Town-planning Scheme, 1974.

### **2.1.5 Existing Land Use**

The township site is currently an informal settlement and inhabited by informal housing.

### **2.1.6 Mineral Rights**

There are no mineral rights affected by the proposed development.

## **2.2 DESCRIPTION OF RECEIVING ENVIRONMENT**

### **2.2.1 Climate**

This area falls within the Central Sandy Bushveld (SVcb12) within the Savanna biome. Central Sandy Bushveld falls within a summer-rainfall region, with very dry winters. Effectively three seasons exist, namely a cool dry season from May to mid-August, a hot, dry season from mid-August to about October and a hot wet season from about November to April. The mean annual precipitation (MAP) is 500-700mm and frost occurs fairly infrequently. Mean monthly maximum and minimum temperatures for Goedehoop (in the northern part of this vegetation unit) is 35.3°C and -3.1°C for November and June respectively (Mucina & Rutherford, 2006).

### **2.2.2 Topography**

Central Sandy Bushveld is distributed throughout Limpopo, Mpumalanga, Gauteng and the North West Province. Undulating terrain occurs mainly in a broad arc south of the Springbokvlakte from the Pilanesberg in the west through Hammanskraal and Groblersdal to GaMasemola in the east. A generally narrow irregular band along the north western edge of the Spingbokvlakte (including Modimolle) extends into a series of valleys and lower-altitude areas within the Waterberg including the upper Mokolo River Valley near Vaalwater. A corridor between Rankins Pass and the Doorndraai Dam and the lowlands from the Mabula area to south of the Hoekberge also exists. Some isolated sandy rises are also found on the Springbokvlakte. Altitude ranges from about 850 – 1450m (Mucina & Rutherford, 2006).

### **2.2.3 Geology and Soils**

The large southern and eastern areas of the Central Sandy Bushveld are underlain by granite of the Lebowa Granite Suite and some granophyres of the Rashoop Granophyre Suite (both Bushveld Complex, Vaalian). In the north, the sedimentary rocks of the Waterberg Group (Mokolian Erathem) are most important, specifically, sandstone, conglomerate and siltstone of the Alma Formation and sandstone, siltstone and shale of the Vaalwater Formation. There are well-drained, deep Hutton or Clovelly soils often with a catenary sequence from Hutton at the top to Clovelly on the lower slopes. Shallow, skeletal Glenrosa soils also occur (Mucina & Rutherford, 2006).

### **2.2.4 Surface water**

One wetland system was identified within the study area. The wetland feature is situated on the northern portion of the assessment site.

### **2.2.5 Current Status and Land Use**

The proposed development area is surrounded by rural residential properties and informal settlements, leaving some of these areas largely transformed through edge effects such as subsistence agriculture and refuse disposal.

### **2.2.6 Regional Vegetation**

The study area falls within the Savanna Biome and Central Bushveld Bioregion of Gauteng. It is represented by one vegetation unit, namely Central Sandy Bushveld, which is a Vulnerable vegetation type. It occurs in low undulating areas and sometimes between mountains. Sandy plains and *catenas* support tall, deciduous *Terminalia sericea* and *Burkea africana* woodland on deep sandy soils (with the former often dominant on the lower slopes of sandy catenas) and low, broad-leaved *Combretum* woodland on shallow rocky or gravelly soils. Species of *Acacia*, *Ziziphus* and *Euclea* are found on flats and lower slopes on eutrophic sands and some less sandy soils. A.

*tortilis* may dominate some areas along valleys. A grass-dominated herbaceous layer with relatively low basal cover can be found on dystrophic sands (Mucina and Rutherford, 2006).

### **2.2.7 Terrestrial Fauna**

The study area does not exhibit any significantly unique or sensitive faunal habitat characteristics. The study area exhibit moderate levels of degradation due to recent human activities.

### **2.2.8 Archaeology**

There were no graves noticed on the proposed site.

### **2.2.9 Cumulative Impacts**

The cumulative impacts associated with the proposed development could be the following:

- Additional traffic on the local roads during the construction period;
- The influx of people in the area as a result of the construction of the residential area;
- Additional water and electricity supply to the area.

## **2.3 POSSIBLE PROJECT BENEFITS**

The project could have certain possible benefits to the Gauteng Province:

### **2.3.1 Economic Benefits**

#### *Short term Employment Creation*

New employment opportunities will be created during the construction of the residential development. This includes much needed employment for existing industry, i.e. contractors (especially local Small, Medium and Micro Enterprises from the previously disadvantaged communities), consultants and suppliers.

#### *Long Term Employment Creation*

Sustainable employment will be created for industry (contractors, consultants) during operation and maintenance of the residential area.

#### *Economic benefit is to the City of Tshwane Metropolitan Municipality*

It is believed that this project will convert non-paying users of services into paying customers which will yield an income to CTMM.



## **2.3.2 Social Benefits**

### *Provision of Services*

Informal energy sources are replaced with formal electricity that will eradicate wood and coal burning stoves. The settlement will have access to services such as water supply and sewerage removal and pit latrines will be eradicated.

### *Skills Development:*

With the construction of the residential area, skills development could occur with practical training in management and technical skills. This could also include unskilled labour training and the use of small and medium enterprises.

## **2.4 ALTERNATIVES CONSIDERED**

### **2.4.1 Alternative 1**

Alternative 1 is the preferred alternative. This alternative entails the establishment of a township, to be known as Winterveld ext 5 on holdings 1418 to 1472, 1541 to 1570 and 1573 to 1589, Winterveld Agricultural holdings, Extension 1. This alternative took into account the following specialist reports to finalise the design of the township:

- Faunal, Floral and Wetland Ecological Assessment for the Proposed Winterveld Extension 5 Development, Soshanguve, Gauteng undertaken by Scientific Aquatic Services (Annexure D);
- Traffic Impact Study report undertaken by Corli Havenga Transportation Engineers (Annexure D).

The total area of development including the stands and streets are 442.15 ha in extent comprising 6462 free standing erven.

### *Advantages of this alternative on the environment*

This layout has less erven to be developed but the development does not encroach on the wetland in the area. This has a positive impact on the environment.

### *Disadvantages of this alternative on community*

This layout has less erven to be developed that could be inhabited by the community.

### **2.4.2 Alternative 2**

This alternative entails an alternative layout to the establishment of Winterveld ext 5 on holdings 1418 to 1472, 1541 to 1570 and 1573 to 1589 that did not consider the specialist studies undertaken by Scientific Aquatic Services or Corli Havenga. The total area of development including the stands and streets are larger than alternative 1 with 488.49 ha in extent comprising 7332 stands as the development encroaches on the wetland. This alternative is not favoured (see Annexure B).

### *Disadvantages of this alternative on the environment*

This layout has more erven to be developed but encroaches on the wetland in the area which has a significant negative impact on the environment.

### *Advantages of this alternative on community*

This layout has more erven to be developed that could be inhabited by the community.

### **2.4.3 No-Go Alternative**

Should this development not be approved, the *status quo* with regard to the area will remain as is with the informal settlement in place without any formal services. The property is situated within the future planned development core of the City of Tshwane. If no applications for township establishment such as this one are done and approved, the SDF for the area cannot be implemented and does not come to fruition.

## **CHAPTER 3**

Covers the approach and methodology of the Scoping Study in the legislative context.

### **3.1 THE ENVIRONMENTAL IMPACT ASSESSMENT (EIA) PROCESS**

This Environmental Impact Assessment is undertaken in accordance with the requirements of the EIA Regulations, 2010 and environmental management principles and objectives of the National Environmental Management Act, 1998 (Act No. 107 of 1998). The Environment Impact Assessment (EIA) regulations, 2010 were promulgated on 18 June 2010 in terms of Section 24(5) of the National Environmental Management Act, 1998 (Act No. 107 of 1998) and came into effect on 2 August 2010. Activities identified in terms of Regulation R.545 may not commence without environmental authorization from the competent authority and in respect of which the investigation, assessment and communication of potential impacts of activities must follow the Scoping-EIA procedure as prescribed.

R. 545, 18 June 2010: Activity 15 - Physical alteration of undeveloped, vacant or derelict land for residential, retail, commercial recreational, industrial or institutional use where the total area to be transformed is 20 ha or more;

R. 544, 18 June 2010: Activity 11 - The construction of:  
(vi) Bulk storm water outlet structures.  
Within a watercourse or within 32 metres of a watercourse.

The Impact Assessment process will be undertaken in four main stages, namely: Scoping phase, Plan of Study for EIA; EIA phase including specialist studies and Environmental Management Programme (EMPr) phase.

The Act prohibits the undertaking of such activities until written authorization is obtained from the Minister or the relevant delegated authority. Authorization, which may be granted subject to conditions, would only be considered once the EIA has been undertaken and submitted for authorization.

The National Environmental Management Act, 1998 (NEMA) furthermore provides a set of “environmental principles” that must guide organs of state in decision-making on matters relating to the environment.

NEMA states that the public must be actively involved with regard to decisions taken relating to the undertaking of identified activities. Public participation in the environmental sphere is a process of consultation between decision-makers and interested and affected parties.

The first substantive step of the EIA process is the Scoping exercise. Scoping entails identifying the significant environmental issues associated with the project. This is done by gathering issues from the public via a public participation process and initial desktop study.

The following tasks are included as part of this Scoping Process:

- Submit application form to the GDARD;
- Site visit and desk study of available information and identification of key issues;
- Identify and compile a list of I&APs;
- Compile and distribute a Background Information Document (BID) to I&APs;
- Advertise in the regional newspapers notifying public of availability of BID;
- Create a list of issues for preliminary investigation;
- Compile a Draft Scoping Report and Plan of Study for EIA and make it available for public comment.
- Submit Final Scoping Report and Plan of Study for EIA to environmental authorities for approval.

Areas needing further investigation, as raised in the scoping report, would be addressed in a further environmental impact study. It will result in an Environmental Impact Report (EIR) which would be the culmination of the environmental impact assessment process contemplated in the EIA Regulations, 2010.

On completion of the EIR, the final EIR will be submitted to the GDARD together with an Environmental Management Programme (EMPr), to review the results of the study and issue an environmental authorisation.

The EMPr would contain, amongst other, the following:

- Communication structures;
- Requirements for environmental training and awareness;
- Legislative Requirements;
- Guidelines for minimizing environmental impacts;
- Monitoring and Auditing Procedures.

## **3.2 OTHER LEGISLATIVE REQUIREMENTS**

### **3.2.1 South African Law**

South African law consists of both common law (customs and case law) and written or statutory law. Statutory law includes the Constitution of the Republic of South Africa Act, 1996 (Act 108 of 1996), national legislation together with regulations promulgated under those national laws, different provincial Acts and Ordinances, and local authority by-laws. With regard to the institutional framework which operates in South Africa, generally national laws are implemented by national government departments, unless as in the case of many environmental statutes, the power to administer all or part of them has been delegated to provincial authorities.

#### **a. The Constitution**

In terms of the Constitution, 1996 (Act 108 of 1996) everyone has the right to an environment that is not harmful to their health or well-being. The Constitution states that government must act reasonably in order to protect the environment by preventing pollution and promoting conservation and sustainable development and further, that it must secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development (Section 24).

#### **b. Development Facilitation Act, 1995 (DFA)**

Chapter 1 of the DFA sets out thirteen “general principles for land development”. These general principles apply to the actions of the State as well as a local government body. These actions of the State and local government bodies include administrative actions performed by the executive arms of three spheres of government and also actions by the legislators in terms of national, provincial and local government legislation. These actions that are affected by the DFA include any physical planning, transport planning, structure planning or zoning schemes.

In essence, the entire range of land use control systems and instruments of the country is affected by the DFA. This is specifically emphasized by the authors of the DFA who wrote that “*any competent authority*” must exercise “*any discretion or take any decision*” in terms of the DFA. In legal terms this means that any discretion which is exercised by a competent authority such as a local government body and which relates

to land development, even if it is in terms of any other legislation, may not be exercised unless the decision maker has applied its mind to the mentioned thirteen principles.

The thirteen general principles for land development in the DFA that deal with a variety of subjects ranging from planning tenure considerations to issues of administrative justice, should therefore serve as a basis of decision making. The principles with a brief indication of how they pertain to the township establishment proposal under consideration, are listed below:

- (a) *Policy, administration and laws should provide for urban and rural development and should facilitate the development of formal and informal, existing and new settlements.*

The proposed development provides for the development of an urban area and facilitates a new settlement.

- (c) *Policy, administration and laws should promote efficient and integrated land development ...*

The application aims at promoting efficient land development.

- (d) *Members of communities affected by land development should actively participate in the process of land development.*

The proposed township will be advertised and in so doing, public participation will be promoted.

- (e) *The skills and capacities of disadvantaged persons involved in land development should be developed.*

During the construction phase of the infrastructure of the township as well as during the construction of the residential units, opportunities are provided to previously disadvantaged persons to obtain work, develop skills and earn an income.

- (f) *Policy, administrative practice and law should encourage and optimise the contributions of all sectors of the economy (government and non-government) to land development...*

The developers, their professional consultants and contractors as well as the community will contribute to and benefit from the development. The service contributions payable to the local authority should also assist the local authority to provide services.

- (g) *Laws, procedures and administrative practice relating to land development should –*

- (i) *be clear and generally available to those likely to be affected thereby;*
- (ii) *in addition to serving as regulatory measures, also provide guidance and information to those affected thereby;*
- (iii) *be calculated to promote trust and acceptance on the part of those likely to be affected thereby;*
- (iv) *give further content to the fundamental rights set out in the Constitution.*

The application is for township establishment in terms of the provisions of the Town Planning and Townships Ordinance, 1986 and the administrative procedure is carried out in terms of this legislation. The procedure is transparent, fair and just and all parties are afforded the opportunity to participate, lodge objections and make representations.

- (h) *Policy, administrative practice and laws should promote sustainable land development at the required scale in that they should-*
  - (i) *Promote land development, which is within the fiscal; institutional and administrative means of the Republic;*
  - (ii) *promote the establishment of viable communities;*
  - (iii) *promote sustained protection of the environment;*
  - (iv) *meet the basic needs of all citizens in an affordable way; and*
  - (v) *ensure the safe utilisation of land by taking into consideration factors such as geological formations and hazardous undermined areas.*

The proposal complies with this principle. The local community will benefit from the development. Environmental factors were considered which will be taken into consideration when development takes place.

- (i) *Policy, administrative practice and laws should promote speedy land development.*

It is the intention to commence with the development as soon as possible and it is presumed that the Municipality will consider this application a priority too in terms of its own time schedule.

- (j) *Each proposed land development area should be judged on its own merits and no particular use of land, such as residential, commercial, conservational, industrial, community facility, mining, agricultural or*

*public use, should in advance or in general be regarded as being less important or desirable than any other land use.*

The proposed development should be evaluated on its own merits. It aims to provide in an existing need and the improvement of residential and community facilities in the area.

- (k) *Land development should result in security of tenure, provide for the widest possible range of tenure alternatives, including individual and communal tenure, and in cases where land development takes the form of upgrading an existing settlement not deprive beneficial occupiers of homes or land or, where it is necessary for land or homes occupied by them to be utilized for other purposes, their interests in such land or homes should be reasonably accommodated in some other manner.*

This application aims to provide security and tenure as well as the upgrading of an existing settlement.

- (l) *A competent authority at national, provincial and local government level should co-ordinate the interests of the various sectors involved in or affected by the land development so as to minimise conflicting demands on scarce resources.*

Approval of the application will be subject to service contributions payable to the Municipality in respect of any additional burden that the proposed development places on existing services.

- (m) *Policy, administrative practice and laws relating to development should stimulate the effective functioning of a land development market based on open competition between suppliers of goods and services.*

The provision of the additional housing will enhance the competitive edge of the property and promote open competition with other developers.

### **c. National Heritage Resources Act, 1999 (Act No. 25 of 1999)**

Section 38 of the National Heritage Resources Act 25, 1999 states that the relevant South African Heritage Resource Agency (SAHRA) office must at the very earliest stages of initiating the following development, notify the responsible heritage resources authority and furnish it with details regarding the location, nature and extent of the proposed development:

- (1) Subject to the provisions of subsections (7), (8) and (9), any person who intends to undertake a development categorised as-

- (a) the construction of a road, wall, powerline, pipeline, canal or other similar form of linear development or barrier exceeding 300m in length;
- (b) the construction of a bridge or similar structure exceeding 50m in length;
- (c) any development or other activity which will change the character of a site-
  - (i) exceeding 5 000 m<sup>2</sup> in extent; or
  - (ii) involving three or more existing erven or subdivisions thereof; or
  - (iii) involving three or more erven or divisions thereof which have been consolidated within the past five years; or
  - (iv) the costs of which will exceed a sum set in terms of regulations by SAHRA or a provincial heritage resources authority;
- (d) the re-zoning of a site exceeding 10 000 m<sup>2</sup> in extent; or
- (e) any other category of development provided for in regulations by SAHRA or a provincial heritage resources authority.

**d. National Water Act, 1998 (Act No 36 of 1998)**

The National Water Act, 1998 defines a watercourse as:

- i) a river or stream;
- ii) a natural channel in which water flows regularly or intermitted;
- iii) a wetland lake or dam into which, or from which, water flows; and
- iv) any collection of water which the Minister may, by notice in the Gazette, declare to be a watercourse, and where relevant, its beds and banks.

Section 21 of the Act states, among other, the following activities as water uses:

- i) taking water from a water resource (borehole/pump);
- ii) impeding or diverting the flow of water in a watercourse (river diversion, low water bridge);
- iii) engaging in a stream flow reduction activity contemplated in section 36;
- iv) engaging in a controlled activity identified as such in section 37(1) or declared under section 38(1);
- v) altering of bed, banks, course or characteristics of a watercourse.

**e. Conservation of Agricultural Resources Act, 1983 (Act No 43 of 1983)**

In terms of the amendments to the regulations under the Conservation of Agricultural Resources Act, 1983 and Section 28 of the National Environmental Management Act, 1998 landowners are legally responsible for the control of invasive alien plants on their properties.



**f. National Forest Act, 1998 (Act No 84 of 1998)**

Some trees are protected in terms of this act. Should destruction of these trees be inevitable, appropriate permits need to be applied for in terms of the NFA (1998).

**g. National Environmental Management Biodiversity Act, 2004 (Act No 10 of 2004)**

Provides for the management and conservation of South Africa's biodiversity within the framework of the National Environmental Management Act, 1998.

### **3.3 INTEGRATED ENVIRONMENTAL MANAGEMENT**

This scoping study promotes the principles of the Integrated Environmental Procedure (IEM) stipulated in NEMA, which include:

- Thorough unbiased scoping;
- Promoting informed decision-making;
- Giving a broad meaning to the term "environment";
- Using a transparent and participatory approach;
- Aiming to mitigate negative impacts and enhance positive aspects; and
- Providing the opportunity for public and specialist input in the decision-making process.

It also ensures:

- That all parties understand implications;
- As much discussion and debate as needed, and
- Evaluation of significance of negative impacts and positive impacts fully in next phase.

## **CHAPTER 4**

Provides a description of the environmental issues identified, methodology to be adopted in assessing the potential impacts and proposed specialists studies to be undertaken.

### **4.1 SYNOPSIS OF KEY ISSUED RAISED**

The Environmental Scoping Study (ESS) identifies the potential positive and negative environmental (biophysical and social) impacts associated with the establishment of the proposed township development. Proposed mitigatory measures describe possible action for the mitigation of the identified potentially negative environmental impacts. The philosophy of identifying mitigation measures for negative impacts is based on the

reduction of the impact during the planning and design phase and the management of the impacts during the construction and operational phases.

The potential impacts associated with the establishment of the proposed Winterveld Extension 5 Township, have been identified as the following:

- Aquatic and wetlands;
- Flora and Fauna;
- Archaeological and heritage impacts;
- Safety and security impacts;
- Construction impacts (dust, noise, crime, traffic, waste, soil erosion and water pollution);
- Traffic.

***Positive impacts:***

Potential positive impacts arising out of this proposed development include possible employment creation through the construction and operational phases, informal energy sources will be replaced with formal electricity that will eradicate wood and coal burning stoves; the settlement will now have access to services such as water supply and sewerage removal and pit latrines will be eradicated.

## **4.2 ANTICIPATED IMPACTS AND RECOMMENDATIONS**

### **4.2.1 Flora and Fauna and Wetlands**

#### Anticipated Impacts

- Possible impacts to flora and fauna and wetlands in the area. A wetland was identified on the study area. The wetland feature is situated on the northern portion of the assessment site.

#### Recommendations

A specialist study was undertaken by Scientific Aquatic Services i.e. Faunal, Floral and Wetland Ecological Assessment for the Proposed Winterveld Extension 5 Development, Soshanguve, Gauteng (Annexure D). The following recommendations are included in the study:

- It is recommended that a comprehensive wetland rehabilitation plan is designed and implemented, which focuses on the rehabilitation of disturbed areas, the rehabilitation and prevention of edge effects and adding value to open space areas through usage by the residents of the proposed development through initiatives such as walking/cycling trails and bird watching hides.

- The footprint of the proposed development activities should be confined to areas presently/historically disturbed and which are of low ecological importance such as the transformed woodland areas.
- Disturbance of individuals of *Sclerocarya birrea subsp. caffra* should be avoided. Should these trees be disturbed during the construction phases of the proposed development, the necessary permits must be applied for in terms of the NFA (1998).
- In terms of the amendments to the regulations under the Conservation of Agricultural Resources Act, 1983 and Section 28 of the National Environmental Management Act, 1998 landowners are legally responsible for the control of invasive alien plants on their properties and it is therefore recommended that the declared weed and invader species be removed.
- Vehicles should be restricted to travelling only on designated roadways to limit the ecological footprint of the proposed development activities.
- No activities are to infringe upon the wetland boundaries or associated buffer zones.
- As much vegetation growth as possible should be promoted within the proposed development area in order to protect soils and to reduce the percentage of the surface area which is left as bare ground. In this regard special mention is made of the need to use indigenous vegetation species as the first choice during landscaping.
- All areas of disturbed and compacted soils need to be ripped and reprofiled.
- All areas affected by construction should be rehabilitated upon once construction activities are complete. Areas should be re-seeded with indigenous grasses as required. All rehabilitated areas should be rehabilitated to a point where natural processes will allow the pre-development ecological functioning and biodiversity of the area to be re-instated.
- The project footprint should remain as small as possible and should not encroach on the ridge/wetland areas and associated buffers. This can be achieved by marking these boundaries and containing all activities within designated areas.
- Prior to construction and operation it is advised to perform a „flush out“ in order to help warn faunal species to move and relocate naturally.
- Educate construction and project personnel about the importance of the natural faunal species and biodiversity of the natural surroundings.
- All informal fires on the property should be prohibited. Where a burning regime is implemented, it should be overseen by a qualified and experienced professional.
- No trapping or hunting of fauna is to take place. Access control must be implemented to ensure that no illegal trapping or poaching takes place.
- Education on identification of any RDL faunal species that are present or may occur within the study site.
- No dumping of waste should take place within the study area. If any spills or waste deposits occur, they should be immediately cleaned up.
- During the construction and operational phases of the proposed project erosion berms should be installed to prevent gully formation and siltation of

the wetland resources. The following points should serve to guide the placement of erosion berms:

- Where the track has slope of less than 2%, berms every 50m should be installed.
- Where the track slopes between 2% and 10%, berms every 25m should be installed.
- Where the track slopes between 10%-15%, berms every 20m should be installed.
- Where the track has slope greater than 15%, berms every 10m should be installed.

#### **4.2.2 Archaeology**

##### Anticipated Impacts

- Archaeological sites, including human burial remains, and buildings over 60 years of age are protected under the National Heritage Resources Act (No. 25 of 1999). The Act came into effect on 01 April 2000, and replaces the National Monuments Act (No. 28 of 1969). The National Monuments Council ceased to exist on 01 April 2000 and has been replaced by the SAHRA.
- It is an offence to destroy, damage, excavate, alter, or remove from its original position, or collect, any archaeological material or object, without a permit issued by the South African Heritage Resources Agency (SAHRA).

##### Recommendations

- An archaeological assessment needs to be undertaken during the impact assessment phase of the entire site to address possible archaeological issues.

#### **4.2.3 Noise**

##### Anticipated Impacts

- The noise (large vehicles) and air pollution (dust) that will be generated during construction period will be disturbing.

##### Recommendations

- It is accepted that noise will be generated on a short term during construction activities. Mitigation measures will be incorporated in the EMP to the project.

#### 4.2.4 Traffic

##### Anticipated Impacts

- Possible impacts related to the additional traffic to the area during construction and operational phases.

##### Recommendations

A traffic study was undertaken by Corli Havenga Transportation Engineers for the proposed development. The following is the conclusion with regards to this study (Annexure D):

This study was done for the formalization of the proposed township Winterveld Extension 5 located on Holdings 1418 to 1472 and 1541 to 1589, Winterveld Agricultural Holdings Extension 1. Winterveld Extension 5 is an established informal settlement, now to be formalised. The proposed township layout therefore needs to accommodate existing structures as far as practically possible.

A total of 7044 residential units are planned with various other uses such as schools, crèches, and community facilities. A substantial business centre is planned on the corner of Bushveld and Molefe Makinta. Molefe Makinta forms part of the provincial road network and is planned as K212. Bushveld Road is planned as K2. Access to the provincial road network needs to be in accordance with the minimum access spacing requirements of Gautrans. A Section 7 report was compiled and submitted to Gautrans for approval, in which the accesses to both Bushveld Road and Molefe Makinta Road are addressed.

This development is located in an area where public transport, bus and mini-bus taxis, plays an important role as a mode of transport. A total of 1078 new residential vehicle trips are expected as a result of the formalisation, with a split of 65:35. Most of the business stands are already in operation and no new business trips are expected except from the bigger business stand east of the intersection of Bushveld and Molefe Makinta, on both sides of Molefe Makinta. A total of 1461 new vehicle trips with a split of 55:45 are expected from these stands.

The other land uses are not expected to generate any significant weekday morning and afternoon external peak hour trips that will impact on the operating conditions of the major intersections analysed for this study. The results of the analysis show that the proposed formalisation of Winterveld Extension 5 can be accommodated by the existing layouts of the major intersections except for the following intersections:

- Bushveld and Molefe Makinta
- Molefe Makinta and 5<sup>th</sup>
- Bushveld Road and M44

Traffic circles are proposed at two of these intersections to accommodate the marginal access to the business nodes off Molefe Makinta midway between Bushveld and 5<sup>th</sup>. A traffic signal is proposed at the intersection of Bushveld Road and M44.

The two main public transport routes are Bushveld and Molefe Makinta. Both are already constructed with standard public transport facilities (lay-byes) at all the constructed intersections. Minibus taxis use most of the existing roads through the area, picking up and dropping off commuters. This is essentially a large residential area and provision is proposed for bus/taxi lay-byes along the major routes.

The proposed business node on the corner of Molefe Makinta Road and Bushveld Road will be a high public transport generator, and provision should be made for additional public transport facilities. At this stage the entire area is developed and residents will have to be relocated to create the business node. As part of this process provision should be made for public transport facilities on both sides of Molefe Makinta Road.

The proposed development is supported from a traffic flow point of view. It is further recommended that:

- The main road network as depicted in the township layout be formalised with the following new access points to the provincial road network:

Off Bushveld Road (K2)

- i) Between Molefe Makinta Road and Phalama
- ii) Between Molefe Makinta Road and Makgatho Road

Off Molefe Makinta Road (K212)

- i) Marginal access on both sides of Molefe Makinta Road between Bushveld Road and 5th Road (Figure 12).

- Access to be designed in accordance with Gautrans design standards.
- The bulk of the road network as depicted in the township layout is implemented.

The following traffic control upgrade will be implemented:

- Intersection: Bushveld Road and M44 - Traffic signal.
- Bus/taxi lay-byes are implemented along the proposed network as depicted in Figure 9A & Figure 9B of the report in Annexure D.
- Provision be made for public transport facilities in or in proximity to the business nodes as depicted in Figure 9A & 9B of the report in Annexure D.

- Sidewalks at least 1,5m wide be provided along the main access roads as depicted in Figure 9A & 9B of the report in Annexure D.

#### **4.2.5 Possible Cumulative Impacts**

The cumulative impacts associated with the development could be the following:

- Additional traffic on the local roads during construction of the road;
- The influx of people in the area as a result of the construction of the road;
- Additional water and electricity supply to the area.

#### **4.3 SPECIALIST INVESTIGATIONS**

The purpose of this chapter is to provide an overview of the type of environmental issues that will be addressed in the specialist studies during the Impact Assessment phase of the EIA. During this phase, the specialists will evaluate all potential impacts on the environment in terms of the following in order to determine the significance of each impact:

- Probability (how likely is it that the impact will occur?)
- Magnitude (how severe will the impact be?)
- Duration (how long will the impact last?)
- Scale of the impact (what size of the area will be affected?)

Thereafter, mitigation measures will be proposed in order to reduce or eliminate negative impacts and enhance positive impacts. The impact of the proposed ring road on the environment will be considered for the pre-construction, construction and operational phases. The necessary mitigation measures will be consolidated in the form of an Environmental Management Programme (EMPr).

The following specialist study will be undertaken during the impact assessment phase:

##### **Archaeology**

A specialist archaeological assessment will be undertaken to assess the impact on any building older than 60 years or graves impacted on by the proposed development.

## **CHAPTER 5**

Provides a description of the public participation process.

### **5.1 BACKGROUND**

A public participation process was undertaken in accordance with the EIA Regulations, 2010. Public Participation is an essential component of the EIA process. The process of public involvement at this stage encourages interested and affected parties (I&APs)

to contribute their comments during the planning and design phases of the proposed development.

The public participation and communication process aims to identify issues in order to maximise the social and environmental benefits, and to minimise the social and environmental costs of the proposed project. Interested and affected parties (I&APs - any person that has an interest in the project or are directly affected), were consulted and afforded the opportunity to participate. I&APs were informed and involved in the project from the outset in order to promote participation and transparency.

## **5.2 OBJECTIVES OF THE PUBLIC PARTICIPATION PROCESS**

The key objectives of the public participation process are to:

- Identify the complete range of I&APs, and inform them about the proposed development and its implications;
- Understand and clearly document all issues, underlying concerns and suggestions raised by I&APs, and
- Identify areas that require further specialist investigation and feedback to I&APs.

## **5.3 METHODOLOGY**

### **5.3.1 Identifying Interested and Affected Parties (I&APs)**

A list of key I&APs was generated at the beginning of the environmental process. These include:

- Department of Water Affairs;
- City of Tshwane Metropolitan Municipality;
- South African National Heritage Resources Agency.
- Ward Councillors.

Refer to Annexure C for a list of Interested and/or Affected Parties.

### **5.3.2 Compilation and Distribution of a Background Information Document (BID)**

The main objective of the BID was to introduce I&APs to the proposed project. The following information was presented as a 3 page summary:

- Introduction
- The EIA process
- Scoping Phase
- Plan of Study for EIA
- Specialist studies
- Environmental Impact Report



- Authority Record of Decision
- Proposed commencement of Construction
- Public Involvement

The BID was available at the public open day for distribution. Refer to Annexure C for the BID.

### **5.3.3 Notification of the EIA Process in the Media**

In order to reach a wide audience, notification of the EIA process was placed in the Daily Sun newspaper of 28 February 2013.

Refer to Annexure C for a copy of the notice.

### **5.3.4 Site Notices**

Site notifications in English in A2 format requesting comments or objections were placed at the site.

A copy of the site notice is included as Annexure C.

### **5.3.5 Written Notices**

Written notices were distributed to I&APs. A copy is included in Annexure C.

### **5.3.6 Review**

As required by legislation, a review process was undertaken affording I&APs an opportunity to comment on the Draft Scoping Report. The draft Scoping Report was available for comment for a 30 day period in the following libraries:

- a. Winterveldt Multipurpose centre/library, and
- b. Bodibeng library Soshanguve Block BB.

The comments on the draft Scoping report is included in Annexure C.

## **CHAPTER 6**

Draws conclusions and makes recommendations on the way forward.

### **6.1 CONCLUSIONS**

The main issues raised in this phase of the environmental investigation are the following possible impacts:

- Aquatic and wetlands;

- Flora and Fauna;
- Archaeological and heritage impacts;
- Construction impacts (dust, noise, crime, traffic, waste, soil erosion and water pollution);
- Traffic.

Two specialist studies were already undertaken to assist with the layout of the proposed development. The studies are:

- Faunal, Floral and Wetland Ecological Assessment for the Proposed Winterveld Extension 5 Development, Soshanguve, Gauteng undertaken by Scientific Aquatic Services (Annexure D);
- Traffic Impact Study report undertaken by Corli Havenga Transportation Engineers (Annexure D).

Both studies were taken into account with the final layout of the proposed development. The wetland delineation study assisted with identifying the wetlands in the area that need to be taken into account with the development. The recommendations in the study were taken into account with the layout of the proposed development.

Potential positive impacts arising out of this proposed development include possible employment creation through the construction and operational phases.

Specific terms of reference, describing the extent of the study required, will be set for the following disciplines in the next phase of the EIA:

- Archaeology.

In terms of the process to be followed, I&APs will be involved throughout the EIA phase and comments on or requirements in regard to this process will be incorporated into planning of that process. The need for public involvement throughout the process into the management planning and design stages has been identified and will be incorporated into further recommendations or processes.

# **PLAN OF STUDY FOR ENVIRONMENTAL IMPACT ASSESSMENT**

## **1. APPROACH TO UNDERTAKING THE ENVIRONMENTAL IMPACT ASSESSMENT**

Should the Environmental Scoping Report be authorised by the GDARD, an Environmental Impact Assessment will be undertaken.

The following outlines the approach which is proposed to be undertaken in order for GDARD to be able to make an informed decision regarding the proposed project.

### **1.1 AUTHORITY CONSULTATION**

#### **a. Site visit with Authorities**

A site visit will be undertaken with the GDARD once the Environmental Scoping Report has been approved, should the GDARD requests the site visit.

#### **b. On-going Authority Consultation**

Consultation with relevant environmental authorities, including Department of Water Affairs will continue throughout the duration of the project.

### **1.2 SPECIALIST STUDIES**

The following specialist studies are proposed to assess issues identified during the scoping phase, and recommend appropriate mitigation measures where required. The findings of these specialist studies will provide input into both the EIA and EMP<sub>r</sub> for this project.

Mitigation measures will be proposed in order to reduce or eliminate negative impacts and enhance positive impacts. The impact of the proposed ring road on the environment will be considered for the pre-construction, construction and operational phases. The necessary mitigation measures will be consolidated in the form of an Environmental Management Plan (EMP<sub>r</sub>).

Aspects to be addressed in specialist studies are briefly described below. Detailed terms of reference will be compiled for each specialist study at the end of the Scoping phase, once stakeholders and the authorities have had the opportunity to verify that all relevant issues for further investigation have been listed.

### **1.2.1 Archaeology**

A specialist archaeological assessment will be undertaken to assess the impact on any building older than 60 years or graves impacted on by the proposed development.

The scope of work will consist conducting a Phase 1 archaeological survey of the site in accordance with the requirements of Section 38(3) of the National Heritage Resources Act, 1999 (Act No. 25 of 1999).

This will include:

- Conducting a desk-top investigation of the area;
- A visit to the proposed development site.

The objectives of the study are to:

- Identify possible archaeological, cultural and historic sites within the proposed development area;
- Evaluate the potential impacts of construction, operation and maintenance of the proposed development on archaeological, cultural and historical resources;
- Permits to be acquired;
- Recommend mitigation measures to ameliorate any negative impacts on areas of archaeological, cultural or historical importance.

## **2. ASSESSMENT OF SIGNIFICANCE – METHOD**

The significance of every environmental impact identified will be determined using the following approach:

In assessing the potential significance of an impact two aspects will be considered:

- i) Occurrence
  - ii) Severity
- Occurrence will be sub-divided into:

- a) Probability of occurrence
- b) Duration of occurrence

Severity will be sub-divided into:

- a) Magnitude (severity) of impact
- b) Scale/extent of impact

In order to assess each of these factors for each impact, ranking scales were employed as follows:

<b>Probability:</b>	<b>Duration:</b>
5 - Definite/don't know	5 - Permanent
4 - Highly probable	4 - Long-term (impact ceases)
3 - Medium probability	3 - Medium-term (5-15 years)
2 - Low probability	2 - Short-term (0-5 years)
1 - Improbable	1 - Immediate
0 - None	
<b>Scale:</b>	<b>Magnitude:</b>
5 - International	10 - Very high/don't know
4 - National	8 - High
3 - Regional	6 - Moderate
2 - Local	4 - Low
1 - Site only	2 - Minor
	0 - None

Once the above factors had been ranked for each impact, the overall risk (environmental significance) of each impact will be assessed using the following formula:

$$SP = (magnitude + duration + scale) \times probability$$

The maximum value is 100 significance points (SP). Environmental impacts will be rated as either of **High**, **Moderate** or **Low** significance on the following basis:

- SP  $\geq$  60 indicates high environmental significance;
- SP 30  $\geq$  59 indicates moderate environmental significance;
- SP < 30 indicates low environmental significance.

### 3. ALTERNATIVES

Alternatives will be further investigated in the EIA phase including the no-go option.

### 4. PUBLIC PARTICIPATION

#### 4.1 Notification of the EIA Phase in the Media

In order to reach a wide audience, notification of the EIA process will be placed in the Daily Sun.

#### 4.2 Additional Stakeholder Meetings

Additional stakeholder meetings will be held should the need arise.

### **4.3 Review**

As required by legislation, a review process will be undertaken affording I&APs an opportunity to comment on the Draft EIA Report for a 30 day period.

## **ANNEXURE A - LOCALITY AND LAYOUT**

## **ANNEXURE B – ALTERNATIVES**



## **ANNEXURE C – PUBLIC PARTICIPATION PROCESS**

## **ANNEXURE D – SPECIALIST STUDIES**

## **ANNEXURE E – APPLICATION FORM**