

**PREPARATION OF A LAYOUT PLAN FOR THE DEVELOPMENT
OF THE PROPOSED PANORAMA BUSINESS PARK ON A PORTION
OF THE REMAINDER OF ERF 783 PANORAMA GARDENS, BEING OFF
BIRMINGHAM ROAD AND NAVAN BOULEVARDE : PANORAMA GARDENS**

DECEMBER 2011

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1 PURPOSE OF REPORT

The purpose of this report is to document the factors that have provided the context for the preparation of the two alternative layout plans for the proposed Panorama Business Park. These are referenced Alternatives A and B and attached as **Appendices 'C1'** and **'C2'** of the BAR.

2 BACKGROUND

Panorama Gardens is a private township development that commenced construction during the late 1980s.

In terms of the provisions of the structure plan for the north eastern sector of the city that was formally adopted into the town planning scheme, the eastern two thirds of Panorama Gardens was set aside for residential development, the western portion was reserved for industrial purposes as a proposed extension of the Willowton Industrial Estate whilst the area forming the southern interface between these two components was identified as an activity node containing commercial and educational uses and social facilities.

The development of the residential component occurred gradually in phases with the last phase, situated in the north eastern corner adjacent to Chief Mhlabunzima Road (Baynes Drift Road/Main Road 25), being currently under construction.

The Panorama Primary School located off Navan Boulevarde is the only element of the proposed activity node that has been developed to date.

The proposed industrial component, which was formerly partially occupied by the Jesmond Dene Plant Nursery, has remained undeveloped apart from being subject to a number of land invasions which saw the demolition of the former nursery buildings and associated structures. The squatter settlement located within the floodplain of the Baynes Spruit in the north western portion of the parent property is a remnant of these land invasions.

In order to facilitate the development of the proposed industrial component the applicant engaged Terratest (Pty) Ltd to undertake an environmental assessment in accordance with the regulations under the National Environmental Management Act (NEMA) (Act 107 of 1998) who in turn appointed eThembeni Cultural Heritage to undertake a heritage assessment.

The applicant subsequently appointed a professional team, comprising Alletson Ecologicals (wetland and vegetation assessment), GeoZone GeoServices (geotechnical investigation), Sukuma Consulting Engineers (Pty) Ltd (civil engineering), DMA (traffic impact assessment), Dereck James (land survey) and Mark Puttick and Associates (town planning), in order to prepare a layout via an integrated town and engineering planning exercise and provide the information required for the preparation of a Basic Information Document (BAR) to support the application for environmental authorisation.

Discussions with the applicant determined that he wished to respond to the apparent demand for a mixed use development which would enable proprietors of commercial, office and light industrial uses to develop their own premises or become tenants in a mixed use commercial centre.

In this regard, it had been noted that an increasing number of non industrial uses are being established in the city's industrial estates, mostly without authorisation, due to the reduced demand for premises for large scale manufacturing and other industrial purposes.

Under these circumstances, and having regard to the fact that the market had shown very little interest in the development of the industrial component of Panorama Gardens for general industrial purposes, it was decided to investigate the potential of developing the undeveloped portion of Panorama Gardens in the form of a mixed use business park, referred to as the Panorama Business Park, which would be similar to the Ballito Business Park located in the western portion of Ballito on the north coast.

In evaluating the undeveloped portion of Panorama Gardens, which now constitutes the Remainder of Erf 783 Panorama Gardens, it was noted that the access way that bisects the western portion of the property, and provides a link between the Afrisam Quarry and a rail siding located off Birmingham Road, runs within a 9.14 registered public road servitude.

As this road servitude is required to remain open, it effectively divides the property into two portions. As the portion located to the north west of the servitude is considered to be largely unsuitable for development, due to it being mostly located within the floodplain of the Baynes Spruit, and the municipal transportation officials were opposed to any upgrading of the servitude to become a formal access point for any further development on the grounds of road safety concerns, it was decided that the servitude would constitute the western boundary of the proposed Panorama Business Park.

As a result, the proposed Panorama Business Park will be situated on a portion of the Remainder of Erf 783 Panorama Gardens, approximately 13.4 ha in extent, which shall hereafter be referred to as the '**application site**'.

The '**application site**' is bounded by the aforementioned road servitude providing access to the Afrisam Quarry to the north west, Birmingham Road to the west, Navan Boulevard to the south, the Panorama Primary School and residential component of Panorama Gardens to the east and industrial uses located on the Afrisam Quarry property to the north.

3 SITE EVALUATION

3.1 Locality (Figure 1)

The '**application site**', situated approximately 3.5 km north east of the Central Area with a central co-ordinate of S 29° 34'.22.41" and E 30° 25'.16.14", forms an interface between the Willowton Industrial Estate, which contains a range of large scale manufacturing industrial uses, and the residential uses and school forming part of the Panorama Gardens residential estate.

REFERENCE



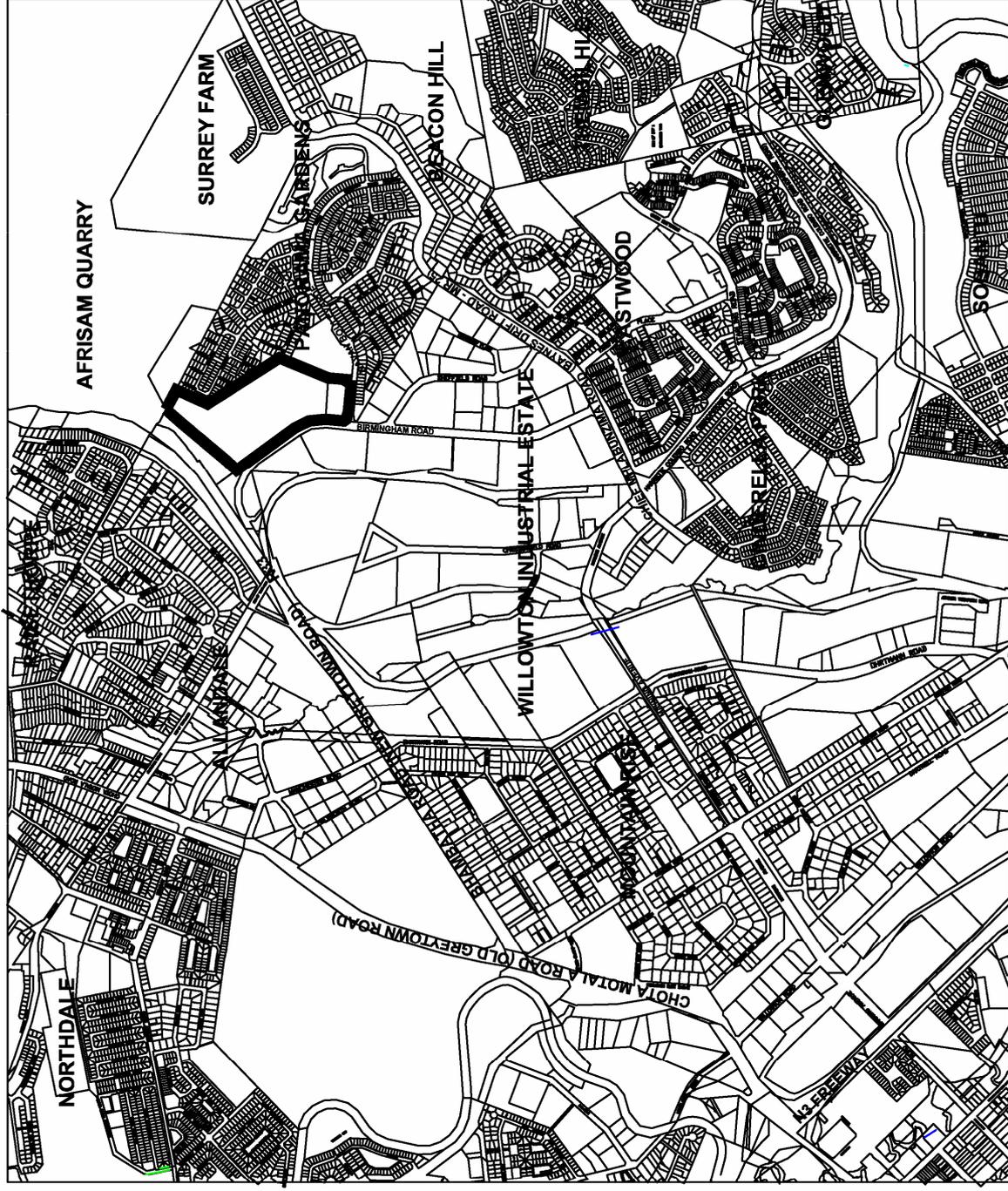
APPLICATION SITE



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DATE: OCT 2011 SCALE : N.T.S.

LOCALITY **FIGURE 1**



The **application site** has an extensive frontage along Birmingham Road which forms an important cross link between Bhambatha Road (New Greytown Road/R33) and Chief Mhlabunzima Road and connects directly into Allandale Drive which in turn provides a further cross linkage between Bhambatha Road and Chota Motala Road (Old Greytown Road). Bhambatha, Chief Mhlabunzima and Chota Motala Roads are the three main arterial roads serving the north eastern sector of the city and also provide short direct linkages to the N3 Freeway.

The **application site** also fronts onto Navan Boulevard which is the primary access collector road serving the Panorama Gardens residential development and also provides an alternative link between Birmingham and Chief Mhlabunzima Roads.

Influence on development

The **application site** is very well located in that the existing road network makes it easily accessible from the surrounding residential suburbs of Northdale, Allandale, Raisethorpe, Copesville, Haniville, Beacon Hill, Panorama Gardens, Eastwood and Cinderella Park and from the north eastern rural portions of The Msunduzi Municipality as well as to people travelling between the city and the adjoining uMshwathi and uMvoti Municipal areas.

The short direct links between the **application site** and the N3 Freeway also makes the property easily accessible from other parts of the city.

The combined attributes of good accessibility, high visibility and a relatively prominent eccentric location on the inboard side of the residential component of the north eastern sector of the city, places the **application site** in an interceptory position in relation to residents travelling to and from Panorama Gardens, Beacon Hill, Copesville and Haniville.

In addition to these areas, the southern portions of Northdale and Raisethorpe and the suburbs of Eastwood and Cinderella Park could also be considered as potentially constituting the primary residential catchment for any commercial uses developed on the property.

Within this context, the proposed development of the Panorama Business Park, which would permit a range of commercial, light industrial and office type uses, is viewed as being an appropriate means of realising the development potential afforded by the locational opportunities of the **application site** whilst providing a more appropriate land use transition between the Willowton Industrial Estate and the residential portion of Panorama Gardens than afforded by the current General Industrial zoning of the property.

With regard to the latter, the establishment of large scale industrial uses is expressly permissible within the current General Industrial zoning whilst noxious industrial uses are permitted by the Council's Special Consent. In contrast, it is proposed that only industrial uses that would be expressly permissible within the proposed Panorama Business Park are light industrial uses such as workshops, warehouses and small scale manufacturing uses.

The locational attributes of the **application site** also suggested the inclusion of a focused or speciality retail centre as an anchor component of the business park. This centre could have a wholesaler, discount department store, hardware store or home improvement store as main tenants along with line shops and possibly a supermarket.

3.2 Topography

A slope and land form analysis was undertaken using contours at 0.5 metre intervals, which was obtained from the detailed contour survey that was undertaken by Dereck James land surveyors.

The **application site** can essentially be divided into two distinct zones on the basis of its topographical features, with the dividing line between these two zones being mostly coincidental with the alignment of a small east west aligned drainage line that bisects the **application site**.

This drainage line flows in a shallow channel which appears to have been excavated rather than naturally eroded and becomes almost imperceptible in the vicinity of the road servitude where it flows over gently sloping land.

The northern half of the **application site**, situated adjacent to the Afrisam Quarry property and residential component of Panorama Gardens, forms part of the western face of a ridge that extends from Darjeeling Heights through Panorama Gardens and Eastwood into Bishopstowe. The gradient of the landform in this portion of the **application site** ranges between 1 : 2 to 1 : 10 with the average being about 1 : 8.

The steeper portions of this zone occur along the boundary with the adjoining residential uses in Panorama Gardens and appear to have been largely created by spoil material being pushed onto the **application site** during the development of the housing estate.

The southern half of the **application site**, situated adjacent to Birmingham Road and Navan Boulevard, is more gently sloping with gradients ranging between 1 : 10 to 1 : 40 with the flat portion located adjacent to the road servitude having a gradient of about 1 : 50.

An open channel has been excavated parallel to Birmingham Road along the south western boundary of this portion of the **application site** and appears to carry stormwater runoff from the north eastern portion of the Willowton Industrial Estate and parts of the residential component of Panorama Gardens. The sides of the channel are defined by earth berms, the tops of which are about 1 metre above the level of Birmingham Road.

The lowest and highest portions of the **application site** are located within the stream channel adjacent to the road servitude along the south western boundary and in the north eastern corner of the property adjacent to the Afrisam Quarry property respectively.

These portions have an elevation of 663 metres and 685 metres above sea level giving a vertical height difference of about 22 metres over a distance of about 365 metres on the steeper sloping northern portion of the **application site** which equates to an overall gradient of about 1 : 16 between the highest and lowest points.

In contrast, the more gently sloping southern portion has a height difference of 15 metres between the eastern boundary adjacent to the school and the lowest point over a distance of about 450 metres which equates to an overall gradient of about 1 : 30 between these points. This clearly illustrates the differing topographical characteristics of the north and southern halves of the **application site**.

The **application site** has a west to south west aspect.

Influence on development

The flatter sloping topography in the southern half of the **application site** facilitates the economic development of service infrastructure and large scale buildings with limited associated earthworks. This portion of the property was evaluated more closely in order to determine the most suitable site for the proposed commercial centre accordingly.

In this regard, the south eastern portion of the **application site** adjacent to the school playing fields was eventually selected as being the optimum location for the proposed commercial centre as it would facilitate the alignment of the centre buildings along contour which, combined with the gentle cross fall, would minimise the requirement for earthworks and avoid a substantial height difference between the parking areas and the buildings.

This locality also had the advantage of being easily accessible from Birmingham Road and facilitating the establishment of gently sloping vehicular access points into the centre from the proposed road network.

Steeper sloping topography, which characterises the northern portion of the **application site**, usually imposes constraints on urban development in that it can impact on the alignment of the road network, particularly higher order roads, and necessitates large volumes of earthworks to facilitate road and building construction. This can in turn result in a disjointed urban form, higher development costs and difficult vehicular access to properties.

However, the gradient of most of the steeper sloping northern portion of the **application site** is not severe and the layout has been able to be designed in a manner that will mitigate the potential constraints often imposed by steep sloping land.

In this regard, the proposed roads serving the northern portion of the **application site** have been aligned to mostly achieve a minimum 1 : 10 cross fall which will reduce the height of cut and fill banks and ease access to individual erven. The size and frontages of erven located in areas where higher cut and fill banks are anticipated have also been increased in order to compensate for any topographically related constraints accordingly.

Topographical features are an important element of landscapes that may be regarded as having scenic beauty or visual amenity. Elevated topography is also regarded as being potentially sensitive in that it can be visually prominent and frames or forms a backdrop to views and vistas.

Although the north eastern portion of the **application site** forms part of the slopes of an elevated ridge, it is not visually prominent as it tends to be overshadowed by surrounding more elevated topographical features, including the Pietermaritzburg 'step', which have a greater elevation and define the city's, northern and north eastern skyline in respect of most views and vistas.

In addition, as the **application site** slopes down from the adjoining residential component of Panorama Gardens, development within the proposed business park will be set below the level of both the existing residences and the school which will ensure that current views and vistas enjoyed by occupants of these areas will not be unduly compromised.

However, as it is accepted that the proposed development will result in the extension of urban development into an area that is currently undeveloped, it is recommended that consideration be given to the formulation of a landscaping plan for the business park, with specific proposals for the landscaping of the road reserves and open spaces and boundary screen planting where this is deemed to be necessary.

3.3 Hydrology

The **application site** drains into the Baynes Spruit which in turn forms part of the dendritic drainage system of the uMsunduzi River. This drainage pattern is usually indicative of relatively high surface runoff rates, caused by the impervious nature of the underlying bedrock and the generally low permeability of soils with a high clay content.

A wetland delimitation exercise was undertaken by Alletson Ecologicals and the two reports prepared, 'Delineation of wetlands at a development site in Panorama Gardens, Pietermaritzburg' and 'Assessment of a small drainage line near Panorama Gardens in relation to proposed industrial development in the area', are attached as **Appendices 'D3'** and **'D1'** of the BAR document.

The wetland assessment noted that the **application site** is bisected by a small east west aligned drainage line that is not indicated on the 1:50,000 map sheet and appears to originate from the flow emanating from a number of drains serving the adjoining Panorama Gardens residential area which is impounded in a small dam located adjacent to the eastern boundary of the property. This dam was constructed in order to store water pumped from the Baynes Spruit as part of the plant irrigation system operated by former nursery.

It was noted that flow along this drainage line, which is defined by an excavated rather than eroded channel that is very shallow in places, is obstructed by the road servitude providing access to the Afrisam Quarry before draining into the Baynes Spruit via a more substantial channel that appeared to have been deepened and straightened. The assessment noted that water diffuses over a wide area adjacent to the road servitude providing access to the Afrisam Quarry due to the combined effect of the physical obstruction created by the access way and the underlying plinthite layer which impedes percolation.

The wetland assessment concluded that the drainage line was "*probably dry throughout much of the winter season or at other times when there is no rainfall*", and noted that flow in the channel "*appeared to be derived primarily from a broken sewer in the residential area to the east*" at the time of the site visit.

It was noted that the channel had been degraded through the invasion of alien plant species and the accumulation of litter, domestic refuse and other deposited materials in places whilst the water flowing in the channel was significantly polluted being "*a dirty grey colour*" and "*contained dense growths of fungi and bacteria*". Subsequent tests of water samples indicated "*an extremely high bacterial count in the main source of the stream*" with a coliform count of 3000 colonies per 100 ml which reduces to 1 030 colonies per 100 ml lower down the drainage line. Both counts indicated a severe health risk.

The **application site** also contains an open drain that has been excavated parallel to Birmingham Road along the south western boundary in order to carry stormwater runoff from the north eastern portion of the Willowton Industrial Estate and parts of the residential component of Panorama Gardens.

The confluence of this drain and the central drainage line occurs in the north western portion of the **application site** adjacent to the road servitude providing access to the Afrisam Quarry. This open drain currently carries very little run off from the **application site** as its sides are defined by berms which are generally higher than the level of the adjoining land.

It has been acknowledged that this drain would need to be piped as part of any development of the **application site**.

Notwithstanding the presence of the two drains, the soil surveys undertaken as part of the wetland assessment indicated that there *“is very little evidence of wetland development at the site. At a few points some very poor mottling was evident but it since there is an underlying plinthite layer it is possible that some of the colour was derived from there”*.

Influence on development

The wetland assessment noted that development of the **application site** for industrial purposes will transform the character of the property and, having regard to experience with streams flowing through the city’s industrial areas, this is likely to an increase *“the abundance of garbage and litter...over current levels”* and become used *“as dump sites for soil or wastes”*.

Within this context, the assessment concluded that it was likely that the banks of the central drainage channel would *“tend to lose their indigenous flora to invasions of hardy pioneer alien species and ultimately the stream may become little more than an open drain”*.

In addition, the assessment noted that although the central drainage channel has *“some indigenous ecosystem function in place at present .. it must be regarded as being of very low conservation value”*.

The wetland assessment considered the following three options for the central drainage channel and its use as part of the stormwater management system:

- (i) An open stream flowing in an unhardened channel which could be bordered on either side by vegetation and stabilized by plant roots.
- (ii) An open stream flowing in a hardened concrete channel.
- (iii) An enclosed stream flowing through underground pipes.

Although the assessment acknowledged that the third option would *“totally destroy the aquatic ecosystem, it does have a number of advantages. Apart from those associated with the lack of obstruction to roads or other conduits through the area, the opportunity for garbage and/or pollution to enter the system will be very significantly reduced”*.

In addition, the assessment concluded that *“the deliberate loss of the ecosystem due to diversion of the water via pipes is not a significant issue since there will be degradation in any event. On this basis the use of an underground pipe system is not a threat to the environment and it is not opposed here.”*

Within this context, and with reference to Figure 3 of the report attached as **Appendix 'D3'** of the BAR, the wetland assessment recommended the implementation of the following water management measures:

- (i) Retention, cleaning out and repair of the existing dam, termed 'Water collection pond' in Figure 3, adjacent to the eastern boundary of the **application site** in order to enhance its function as; a wetland; attenuation pond for stormwater flowing from the adjacent residential component of Panorama Gardens; and an initial biological filter.
- (ii) Piping the channel below the dam to discharge into a new pond, termed 'Intermediate stormwater management pond' in Figure 3, constructed to the east of the road servitude providing access to the Afrisam Quarry which would also serve as a further stormwater attenuation pond. The planting of reeds and sedges in this pond was recommended in order to provide a further biological filter for water discharging into the Baynes Spruit.
- (iii) Accommodating the overflow from the new pond under the road servitude via piping or the installation of a culvert and discharging this into a second larger pond, termed 'Final pond' in Figure 3, to the west of the road servitude providing access to the Afrisam Quarry which could be developed as a water feature. The flow from this pond would discharge into the Baynes Spruit via the existing channel.

At a meeting held between the applicant and representatives of the Environmental Division of The Msunduzi Municipality, WESSA, Alletson Ecologicals and Terratest, it was concluded that two alternative layouts should be prepared based on either piping most of length of the central drainage line in accordance with the recommendations of the wetland assessment or allowing it to continue flowing in an open unhardened channel.

With regard to the alternative with the open drainage channel, Alletson Ecologicals recommended a 15 metre wide buffer zone which is planted to "*either lawns or to indigenous veld vegetation and trees*" with the sides being planted "*with indigenous grasses and sedges with the occasional tree*" and for stones to be possibly introduced in order to "*create pools and riffles*" along the channel. It was also recommended that the retention ponds should have a 15 metre buffer and not be deeper than 1.5 metres with a "*flat or gently sloping substrate with an average depth of about 0,5 to 0,7 m*" and planted with "*aquatic plants such as reeds, rushes and sedges*" in order to "*perform the water purification process*".

The alternative layout plans, **A** and **B** which are attached as **Appendices 'C1'** and **'C2'** of the BAR, have been prepared in accordance with the outcome of the meeting with representatives of environmental bodies and the recommendations of Alletson Ecologicals.

The design of the layouts have also ensured that all the proposed erven that will be zoned for General and Religious purposes are situated well above the 1 : 50 year floodlevel.

3.4 Geology & Soils

The geology and soils have been assessed by GeoZone GeoServices by excavating and profiling 14 test pits and undertaking 13 dynamic cone penetrometer tests adjacent to the test pits. A copy of the geotechnical assessment is attached as **Appendix 'D6'** of the BAR.

The geotechnical assessment found the **application site** to be underlain by a “*mantle of fill, pedogenic, colluvial and residual soils which overlie weathered dolerite of Post Karoo age*”.

The fill material encountered in 6 test pits extended to an average depth of 0.7 metres and comprises gravel road base, potting bags emanating from the operation of the former nursery and garden refuse.

The colluvial soils comprise slightly moist, dark greyish brown soft silty clay which is encountered at depths ranging between 0.2 to 1.1 metres below ground level whilst the pedogenic material encountered in two test pits in the south central portion of the **application site** comprised ferricrete gravel and hardpan horizons.

Alluvium, in the form of very moist to wet greyish brown/yellowish soft very silty clay was encountered in the test pits excavated adjacent to the central drainage line and extended to depths in excess of 3 metres in places whilst residual soils which extended to a similar depth comprised reddish brown, soft to firm, silty clay with variable amounts of ferricrete gravel scattered throughout the horizon.

No bedrock was encountered in the test pits excavated.

Influence on development

The geotechnical investigation concluded that the **application site** was stable and suitable for the proposed development provided that both surface and groundwater is appropriately controlled and appropriate foundations are constructed within the boundaries of the 3 areas that have been determined in accordance with the NHBC criteria.

In this regard, the investigation recommends that “*a stiffened or cellular raft foundation solution be adopted for founding the structures, with the necessary site drainage and service and plumbing precautions*” in most part of the **application site** and that “*no foundations should be placed in fill unless it has been specifically engineered to support structural foundations*”.

3.5 Land Use Management Controls (Figure 2)

The **application site** is subject to the provisions of the Pietermaritzburg Draft Town Planning Scheme.

Most of the **application site** is currently zoned for “General Industrial” purposes in terms of the adopted structure plan with an 11 200 m² site, located at the corner of Birmingham Road and Navan Boulevard, being zoned for “Limited Business” purposes together with an 850 m² site located adjacent to Panorama Primary school which is zoned for “Religious Purposes”

The boundaries and areas of these land use components have a degree of flexibility and are able to be finally determined as part of the preparation of a layout as in the case of the residential component of Panorama Gardens.

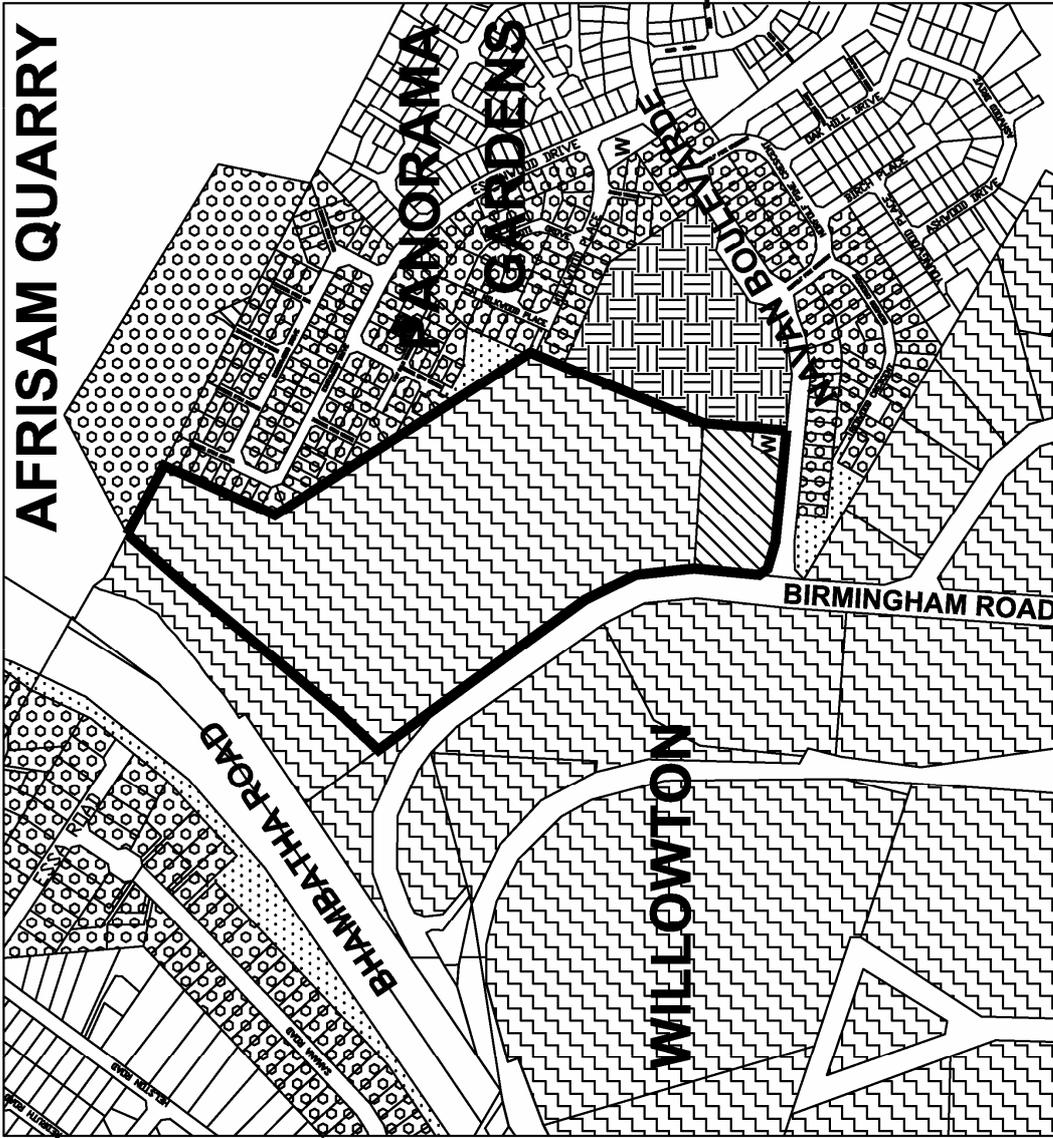
REFERENCE

- APPLICATION SITE
- ACTIVE PUBLIC OPEN SPACE
- EDUCATION
- GENERAL INDUSTRIAL
- LIMITED BUSINESS
- RELIGIOUS/PUBLIC WORSHIP
- SPECIAL RESIDENTIAL

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EXISTING ZONING **FIGURE 2**



Uses including an “Industrial Building”, a “Light” and “Service Industrial Building”, “Motor Salesroom” and “Workshop” and “Service Workshop” are currently expressly permissible within the “General Industrial” component with various uses including a “Business Premises”, “Flat”, “Institution”, “Noxious Industrial Building”, “Parking Garage” and “Lot”, “Petroleum Filling Station”, “Place of Public Entertainment”, “Place of Instruction”, “Place of Worship”, “Restaurant”, “Shop”, and “Special Building” being permitted with Council’s Special Consent.

“Business Premises”, “Dwelling”, “Flat”, “Public Office”, “Residential Building”, “Restaurant”, “Shop” and “Specialised Office” are currently expressly permissible within the “Limited Business” component with various uses including a “Agricultural Building”, “Boarding House”, “Institution”, “Parking Garage”, “Parking Lot”, “Petrol Filling Station”, “Place of Instruction”, “Place of Public Entertainment”, “Place of Worship”, “Public Garage”, “Social Hall” and “Special Building” being permitted with Council’s Special Consent.

The zoning and reservation of the surrounding properties is:

- (a) Above the **application site** (to the north)
Unzoned Afrisam Quarry property and “Special Residential”
- (b) To the right (east) of the **application site**
“Special Residential”, “Active Public Open Space” and “Education”
- (c) Below (to the south) the **application site** (across Navan Boulevard)
“Special Residential” and “General industrial”
- (d) To the left (west) of the **application site** (across Birmingham Road)
“General industrial”

There is no control of “Bulk” in respect of industrial uses within the “General Industrial” zone whilst the “Coverage” and “Height” of buildings is limited to 90 % and a 60° Light angle respectively and parking is required to be provided on the basis of the greater of 10 % of the site area or 15 % of the floor area of a building.

The current controls associated with the development of a non industrial use within the “General Industrial” zone are a “Bulk”, “Coverage” and “Height” of 1.5, 75 % and 3 “Storeys” respectively, and associated on-site parking is required to be supplied in accordance with the Scheme requirements for uses as provided for in the controls for other relevant land use zones.

The current controls associated with the development of non residential uses within the “Limited Business” zone are a “Bulk”, “Coverage” and “Height” of 1, 50 % and 3 “Storeys” respectively and associated on-site parking is required to be supplied 1.2 m² of gross parking per 1 m² of gross floor area.

The **application site** is also subject to conditions which are contained in the Deed of Transfer, T 058407/07.

It is noted that the Spatial Development Framework Plan (SDF) component of the IDP designates the future use of the **application site** for residential purposes contrary to the current zoning. The consultants who prepared the SDF have provided no rationale for this designation or consulted the applicant regarding the proposed change of use. Officials of the Msunduzi Municipality Development Services section have indicated that the residential designation in the SDF is an error that would be corrected when the SDF is reviewed and also indicated that they would support an application for the development of the proposed Panorama Business Park.

Influence on development

In order to enable the applicant to secure purchasers and tenants for the proposed Panorama Business Park, it is essential that potential components such as a “Business Premises”, “Shop” and office uses become ‘expressly permissible’. With reference to **Figures 3 and 4** overleaf, this will be achieved by rezoning the proposed erven for “General” purposes together with either an Appendix 3 amendment to permit industrial uses on erven with a minimum area of 1 000 m² or a written undertaking from the municipality that industrial uses would be permitted on such erven in accordance with the discretionary provisions of clause 6.3.1 of the town planning scheme.

A comparison between the development potential permitted by the current and proposed zoning is given in the **table** overleaf..

The significant changes resulting from the adoption of the proposed rezoning to “General” purposes will be that a “Noxious Industrial Building” will become a prohibited use; uses classified as being an “Industrial Building” (heavy industrial type uses) will require Council’s Special Consent; whilst uses such as a “Business Premises”, “Dwelling”, “Flat”, “Residential Building”, “Restaurant”, “Shop” and “Specialised Office” would become expressly permissible on the **application site** rather than being permitted by Council’s Special Consent in terms of current “General Industrial” zoning.

The exclusion of potential noxious industrial uses and the requirement for heavy types of industrial uses to be subject to Council’s Special Consent is regarded as being more appropriate than the situation under the current zoning as this will facilitate a development on the **application site** that will create a more compatible interface with the adjoining residential component of Panorama Gardens and have less potential impact on the amenity of the surrounding residents. The reduction in the permissible height of buildings from a 60° light angle to a maximum of 3 storeys via the proposed rezoning to “General” purposes is also regarded as being more appropriate with respect to adjoining residential component of Panorama Gardens.

None of the conditions contained in the Deed of Transfer place any restrictions of the proposed development of a business park on the **application site**.

Having regard to the above, the proposed rezoning of the proposed erven for “General” purposes is regarded as being the most appropriate means of facilitating the development of the **application site** in a manner that will optimise its locality; meet the need for small scale individually owned commercial and light industrial premises; and create an appropriate transition between the large scale industrial manufacturing uses off Birmingham Road and the residential component of Panorama Gardens.

**COMPARISON BETWEEN THE EXISTING “GENERAL INDUSTRIAL” AND
“LIMITED BUSINESS” ZONING AND THE PROPOSED “GENERAL” ZONING**

| ELEMENT | CURRENTLY PERMITTED | | PROPOSED |
|------------------|--|---|--|
| | GENERAL INDUSTRIAL ZONE | LIMITED BUSINESS ZONE | |
| Land Use | Industrial, Light and Service Industrial Building, Motor Salesroom and Workshop and Service Workshop with various uses including a Boarding House, Business Premises, Dwelling, Flat, Institution, Noxious Industrial Building, Parking Garage and Lot, Petroleum Filling Station, Place of Public Entertainment, Place of Instruction, Place of Worship, Residential Building, Restaurant, Shop, Social Hall and Special Building being permitted with Council’s Special Consent. | Business Premises, Dwelling, Flat, Public Office, Residential Building, Restaurant, Shop and Specialised Office with various uses including a Agricultural Building, Boarding House, Institution, Parking Garage, Parking Lot, Petrol Filling Station, Place of Instruction, Place of Public Entertainment, Place of Worship, Public Garage, Social Hall and Special Building being permitted with Council’s Special Consent. | <p>Permitted within the General Zone Business Premises, Dwelling, Flat, Light Industrial Building, Motor Salesroom, Motor Workshop, Outbuilding, Public Office, Residential Building, Restaurant, Service Industrial Building, Service Workshop, Shop, Specialised Office with uses including; Agricultural Building, Boarding House, Industrial Building, Institution, Parking Garage, Parking Lot, Petrol Filling Station, Place of Instruction, Place of Public Entertainment, Place of Worship, Public Garage, Social Hall and Special Building being permitted with Council’s Special Consent.</p> <p>Proposed Development A business park containing a mix of commercial, office and light industrial uses and a site for an Ashram.</p> |
| Site Area | 3 000 m ² (Minimum for Industrial Uses outside of the Central Area) 1 000 m ² (Minimum for Industrial Uses within the Central Area) 1 000 m ² (Minimum for Office uses) 500 m ² (Minimum for other commercial uses) | 1 000 m ² (Minimum for Office uses) 500 m ² (Minimum for other commercial uses) | Unchanged Permitted within the General Zone 1 000 m ² (Minimum for Industrial Uses via an Appendix 3 amendment or consent under clause 6.3.1) 500 m ² (Minimum for other business uses) |
| Coverage | Industrial uses : 90 % Non Industrial uses : 75 % | Non Residential uses : 50 % | Permitted within the General Zone : 75 % (non residential uses) |
| Bulk | Industrial uses : Not controlled Non Industrial uses : 1.5 (40 320 m ²) | Non Residential uses : 1 | Permitted within the General Zone : 1.5 (non residential uses) |
| Height | Industrial uses : 60 ° Light Angle Non Industrial uses : 3 Storeys | Non Residential uses : 3 Storeys | Permitted within the General Zone : 3 Storeys (non residential uses) |
| Parking | Industrial uses : The greater of 10 % of the site area or 15 % of the floor area Other uses : as provided for by the Scheme controls for other land uses zones | Business Premises, Offices and Shops : 1.2 m ² of gross parking per 1 m ² of gross floor area | Required : Dependant on the mix of uses |

REFERENCE

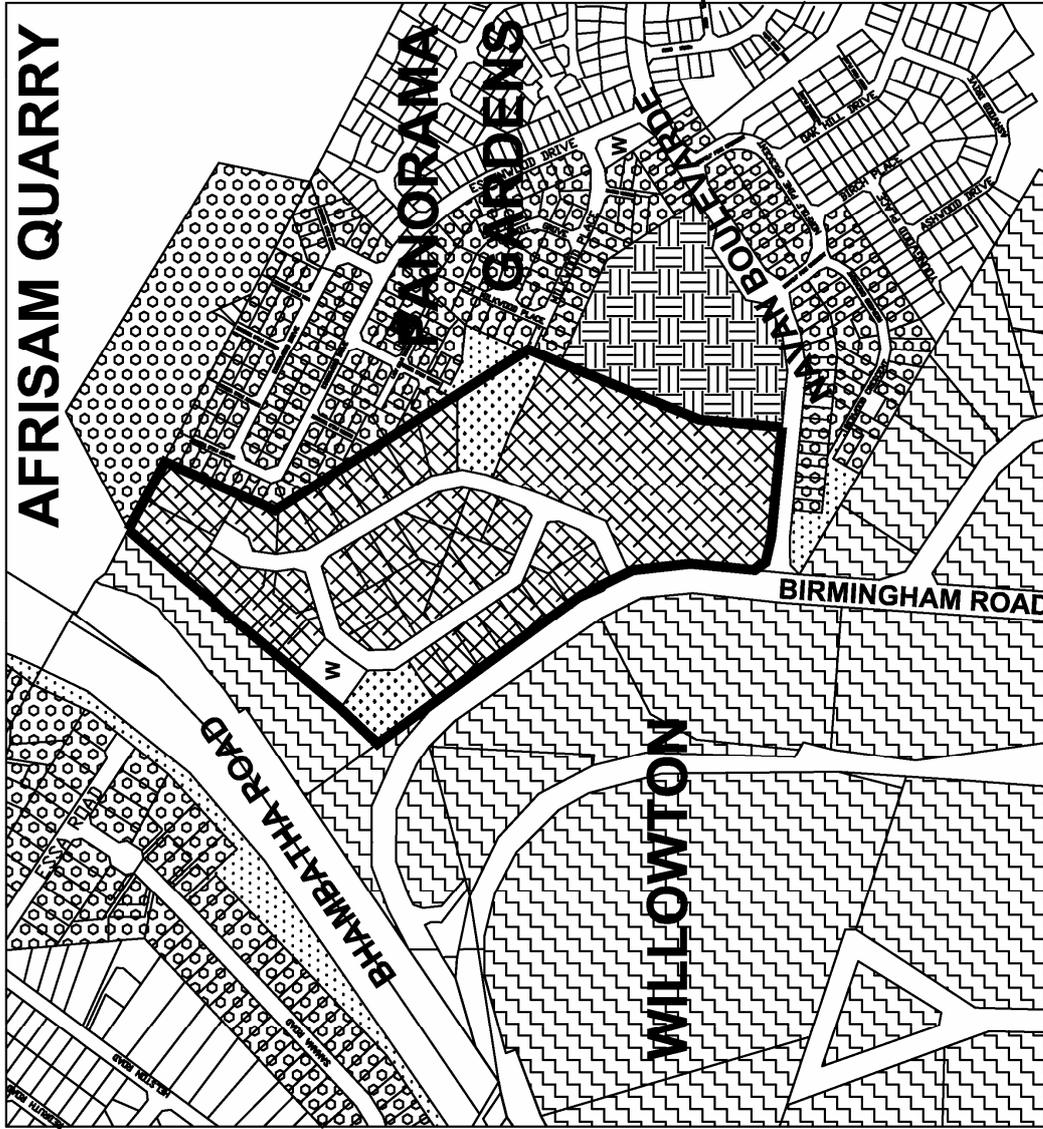
-  APPLICATION SITE
-  ACTIVE PUBLIC OPEN SPACE
-  EDUCATION
-  GENERAL
-  GENERAL INDUSTRIAL
-  LIMITED BUSINESS
-  PRIVATE OPEN SPACE
-  RELIGIOUS/PUBLIC WORSHIP
-  SPECIAL RESIDENTIAL

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DATE: NOV 2011 SCALE: N.T.S.

**PROPOSED ZONING
 ALTERNATIVE A** **FIGURE 3**



1 KM

500 m

100 m



REFERENCE

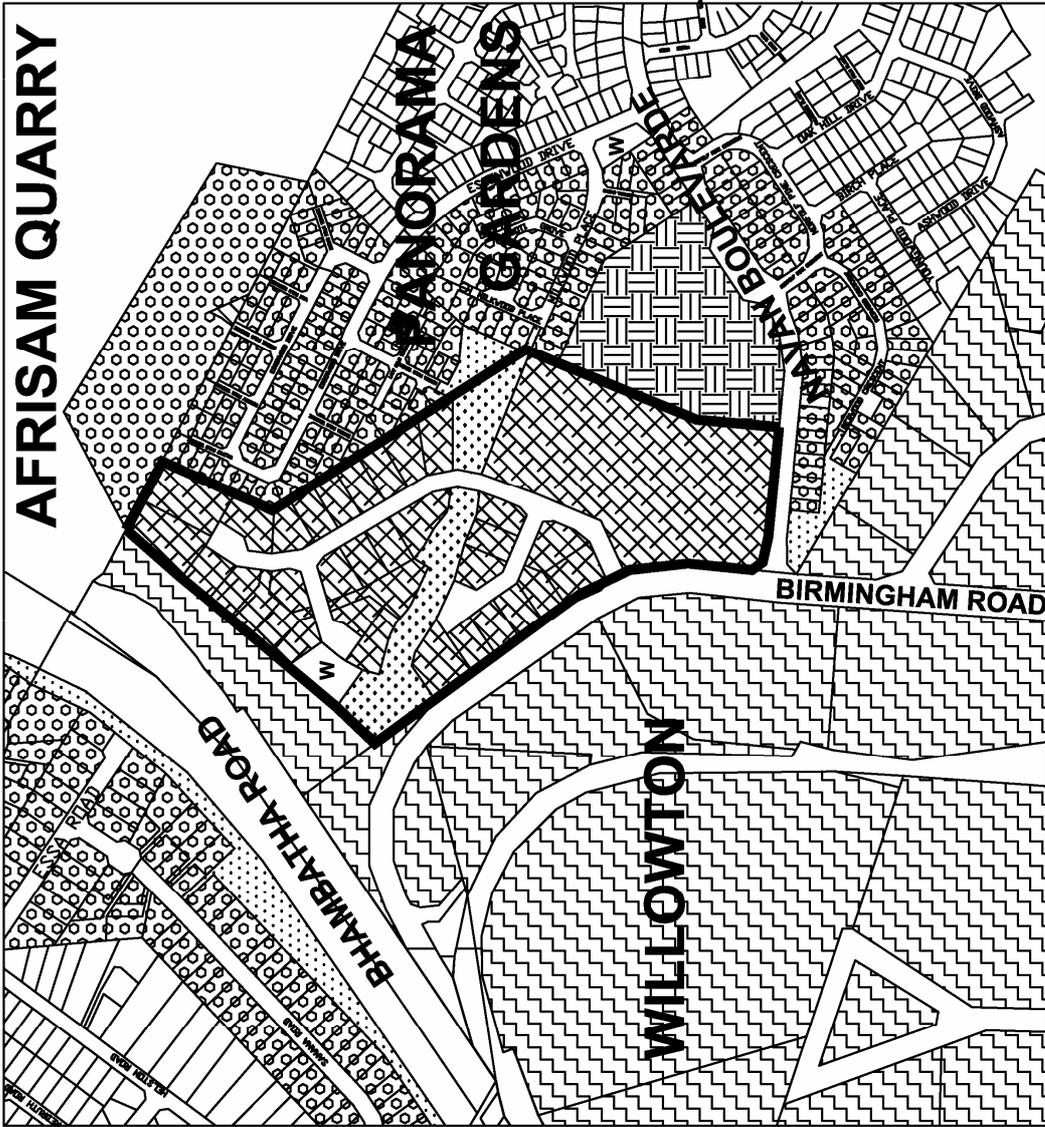
-  APPLICATION SITE
-  ACTIVE PUBLIC OPEN SPACE
-  EDUCATION
-  GENERAL
-  GENERAL INDUSTRIAL
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**PROPOSED ZONING
 ALTERNATIVE B**

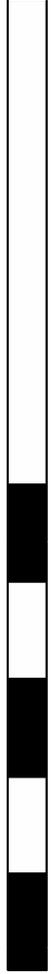
FIGURE 4



1 KM

500 m

100 m



3.6 Land Use

The **application site** is currently vacant and largely derelict following the closure of the Jesmondene Plant Nursery and subsequently being subject to periodic land invasions. The squatter settlement located within the floodplain of the Baynes Spruit in the north western portion of the parent property is a remnant of these land invasions.

The wetland assessment determined that the soils on the **application site** have been highly disturbed in the past with evidence of “*topsoil mining*”. This was confirmed by the geotechnical investigation as fill material, comprising gravel road base, potting bags emanating from the operation of the former nursery and garden refuse was encountered in 6 test pits down to an average depth of 0.7 metres.

The wetland assessment also found that almost all of the original vegetation had been destroyed and that the present cover had changed to predominantly pioneer species which included invasive alien plants and ornamental species.

The uses of the surrounding properties are:

(a) Above the **application site** (to the north)

Industrial buildings on the Afrisam Quarry property and informal housing

(b) To the right (east) of the **application site**

Detached dwellings, unimproved open space and school playing fields

(c) Below (to the south) the **application site** (across Navan Boulevard)

Vacant industrial buildings and detached dwellings

(d) To the left (west) of the **application site** (across Birmingham Road)

Industrial buildings (Fram/Gud Filters and Kaymac Rotomoulders), rail siding used to load quarry materials and an industrial park

The heritage assessment undertaken by eThembeni Cultural Heritage which is attached as **Appendix ‘D2’** of the BAR, “*identified no heritage resources within the proposed development area*” and recommended that “*the development proceed with no further heritage mitigation*”.

Influence on application

Despite the **application site** being zoned for industrial purposes in the late 1980s and its location adjacent to the Willowton Industrial Estate, there has been little interest in the acquisition of land, particularly large erven, for industrial purposes which undermined the economic viability of establishing an industrial township development and resulted in the property remaining vacant.

In this regard, there is currently an oversupply of industrial zoned land in the city with vacant serviced erven being available in the Masons Mill and Shortts Retreat Industrial Estates. This situation is likely to be compounded by the development of planned new industrial estates along the N3 Freeway as part of the N3 corridor development.

However, based on the recent interest that has been shown in the acquisition of smaller premises to accommodate a mix of light industrial, commercial and office uses, the proposed development of the Panorama Business Park is viewed as being an appropriate means of; accommodating demand for such premises; maximising the locational advantages of the **application site** and achieving a more desirable mix of land uses that will establish a more compatible and complementary interface between the existing adjoining housing in Panorama Gardens and the large scale industrial development within the Willowton Industrial Estate.

Having regard to the previous land invasions, it is contended that it would be undesirable to leave the **application site** undeveloped.

Although the heritage assessment identified no heritage resources, it is acknowledged that the provisions of the Heritage Resources Act (25 of 1999) requires all work to cease in the event that any heritage resources are discovered during construction and that Amafa aKwaZulu-Natali be notified accordingly.

3.7 **Infrastructure**

3.7.1 Roads

The **application site** is well served by the existing higher order road network comprising Bhambatha Road (New Greytown Road/R33) and Chief Mhlabunzima Road (Baynes Drift Road/Main Road 25), which are the primary arterial roads serving the city's north eastern suburbs and the main road links to the uMshwathi and Umvoti Municipal Areas.

The **application site** has an extensive frontage along Birmingham Road which forms an important cross link between Bhambatha and Chief Mhlabunzima Roads and connects directly into Allandale Drive which in turn provides a further cross linkage between Bhambatha Road and Chota Motala Road (Old Greytown Road) which is the primary arterial road serving the city's northern suburbs.

These three arterial roads provide short direct linkages between the **application site** and the N3 Freeway.

The **application site** also fronts onto Navan Boulevard which is the primary access collector road serving the Panorama Gardens residential development and also provides an alternative link between Birmingham and Chief Mhlabunzima Roads.

3.7.2 Potable Water

The proposed development will be serviced by an extension of the existing municipal reticulated water supply and each erf will be separately metered.

The water mains serving the layout will ensure an appropriate level of supply to fire hydrants that will be located throughout the development in accordance with the municipal requirements.

3.7.3 Sewerage

The proposed development will be serviced by an extension of the existing municipal reticulated sewer system and each erf will have a separate connection.

3.7.4 Electricity

The proposed development will be serviced by an extension of the existing municipal electricity supply via new mini sub stations and each erf will be separately metered.

3.7.5 Stormwater Management

As detailed in **Appendix 'D4'** of the BAR, stormwater runoff will be directed into retention areas on each erf in accordance with the municipality's requirements as well as into the two retention ponds located along the alignment of the central drainage channel. The proposed reticulated stormwater system serving the layout will comprise a system of catchpits, kerb and channels, side inlets, discharge pipes, head walls and reno mattresses.

3.7.6 Solid Waste Removal

Refuse generated by occupants of the proposed erven will be collected by the municipal refuse service on the scheduled refuse collection days for commercial and industrial properties.

Influence on application

A traffic impact assessment was undertaken by transportation specialists, DMA, in order to determine the potential impact that the proposed development could have on the existing road network and to identify the need for any improvements. A copy of the report documenting this investigation is included as **Appendix 'D7'** of the BAR.

This report recommends that the following measures be implemented in order to accommodate the projected traffic generated by the proposed Panorama Business Park:

(i) **Intersection of Bhambatha/Birmingham Roads**

The introduction of a south to west turning lane and a right turn green arrow signal phase for right turning movements from Bhambatha Road into Birmingham Road.

(ii) **Intersection of Birmingham Road and Panorama Business Park access road**

The proposed access to be 'stop' controlled with a right turn refuge lane provided on Birmingham Road within the existing road width and for the access road to have the potential to accommodate local widening in places up to at least the first main intersection within the development in order to accommodate dedicated turning lanes if required.

A traffic impact assessment also found the location of the proposed entrance to the Panorama Business Park to be acceptable in terms of criteria related to traffic management and road safety and, with reference to the letter included as **Appendix 'E2'** of the BAR, this has been supported by the Transportation Planning unit of The Msunduzi Municipality.

Although Sukuma are of the view that the proposed development will not exceed the capacity of the existing infrastructural services this has not been formally confirmed by municipal officials to date.

The proposed stormwater management measures incorporated throughout the proposed development have been designed to ensure that stormwater runoff is appropriately managed in accordance with the municipality's requirements and to observe the 15 metre buffer requirement for retention ponds and any open sections of the central drainage channel which has been recommended by Alletson Ecologicals.

4 NEED AND DESIRABILITY

Whilst the need for the proposed development of the Panorama Business Park has been precipitated by the applicant's desire to respond to market forces and develop the **application site** in a manner that realises an appropriate economic return on an investment, it is also concerned with a number of broader town planning issues.

(i) **Appropriateness of the provisions of the Pietermaritzburg Town Planning Scheme in respect of the application site**

The current "General Industrial" zoning of most of the **application site** is not considered to be appropriate within the context of;

- the lack of interest that has been shown in utilising the **application site** to accommodate large scale industrial activities;
- the compatibility of some of the uses currently permitted within this zone with respect to the nature and scale of the adjoining residential uses in Panorama Gardens;
- the availability of vacant serviced land in the city's main industrial estates, which are considered to be a preferable location for major industrial activities, and the development of planned new large scale industrial estates off the N3 in the Mkhambathini and Ethekekwini Municipalities;
- the acceptance that the portions of the city's industrial zones should, where appropriate, facilitate the establishment of mixed use developments which accommodate business premises, light industrial, office and retail uses;
- the interest that has been shown in respect of acquiring land in the proposed Panorama Business Park to accommodate commercial and small scale light industrial uses; and
- the need to facilitate the economically viable and sustainable use of the **application site**.

Under these circumstances, identifying a more appropriate zoning of the **application site** that takes account of the factors listed above and the locational attributes of its environs is regarded as being both 'necessary' and 'desirable' in the public interest.

(ii) **Alternative development scenarios for the application site**

It is contended that there are essentially four substantive alternative development scenarios that are relevant to the **application site**. These are evaluated as follows:

(a) Leaving the property undeveloped

This scenario, which equates to the 'do nothing scenario', is not considered to be practical or desirable as it would not enable the applicant to realise an appropriate return from a land investment and it is highly likely that the property would become subject to further land invasions and unauthorised dumping.

- (b) Developing the property in terms of the current General Industrial and Limited Business zoning.

This scenario is not regarded as being desirable with the context of the issues examined in **section 4 (i)** above and, due to the lack of interest in the industrial component, it is likely that only the “Limited Business” component would be developed with the balance of the **application site** remaining undeveloped with similar consequences to the ‘do nothing scenario’.

- (c) Rezoning the property to facilitate its development for predominantly residential purposes

This scenario is not regarded as being viable in either the short to medium term within the context of the abundance of vacant serviced residential land in the surrounding area. In this regard, vacant land is still available within the final phase of Panorama Gardens, Beacon Hill Estate has seen little development over the last 5 years and Darjeeling Heights and Bakerville located in Raisethorpe and Northdale respectively remain largely undeveloped. There are also plans to develop Surrey Farm located adjacent to Panorama Gardens and opposite the Beacon Hill Estate for residential purposes.

In addition to these developments which cater for the middle income sector of the market, which would be the market for any private sector residential development on the **application site**, three phases of Copesville, which would be aimed at catering for the lower income sector, still have to be developed.

Consequently, if this scenario were pursued, only the “Limited Business” component is likely to be developed, assuming that the zoning of this component is retained, within the medium term with the balance of the **application site** remaining undeveloped. This would have similar consequences to the ‘do nothing scenario’.

This scenario or a predominant residential development is also not regarded as being an optimum use of land that is currently zoned to accommodate economic activities within the context of the urgent need to stimulate job creation in the city and contribute to the economic sustainability of the future residents of the planned residential developments in the surrounding area.

In this regard, the development of the **application site** to accommodate economic activities with the associated creation of new job opportunities is viewed as contributing to achieving a more desirable mix of land uses in the area and assisting in reducing the commuting distances for some of the future residents in the surrounding area.

- (d) Rezoning the property to facilitate the proposed Panorama Business Park

The interest that has been shown in acquiring premises for a range of business and office related uses rather than large scale industrial activities and the applicant’s concomitant desire to accommodate this demand indicates that the **application site** potentially satisfies the requirements of investors, developers and tenants. These requirements include; good visibility and accessibility from the major road network; a good quality environment, close proximity to a range of commercial and business activities and affordable premises.

The proposed Panorama Business Park is viewed as having the ability to enhance rather than interfere with the current amenity of the surrounding area when compared with a development under the current zoning and is anticipated to have the following benefits for the city:

- providing opportunities to accommodate the demand for additional accommodation for “Business Premises”, “Light Industrial Buildings” and “Offices” which has the potential to relieve the pressure that is currently being exerted on residential precincts in the city’s northern suburbs via the infiltration of unauthorised uses;
- securing a sustainable use for the currently vacant property without requiring any unplanned expenditure by the Municipality;
- enhancing the economic and investment climate of Pietermaritzburg through sustained local investment;
- contributing to increasing the rates base of the Municipality;
- facilitating the creation of additional job opportunities in the northern sector of the city; and
- contributing to the attainment of the goals of the IDP with respect to making more efficient use of the existing infrastructure; encouraging a greater mix of land use activities and building the local economy.

(iii) **Determining the most appropriate zoning for the application site**

In terms of the provisions of the scheme, the use of a property within the “General Industrial” zone for certain commercial purposes may be permitted with the Council’s Special Consent. This requirement was introduced at a time when the use of industrial land was highly regulated at a national level in order to ensure that the limited amount of land that had been permitted to be set aside to accommodate industrial activities was not inundated by commercial uses to the detriment of such industrial activities.

However, as an application for Council’s Special Consent is considered on the grounds of interference with the amenity of the surrounding neighbourhood, a number of appeals against Council’s refusal of applications to establish commercial uses in industrial areas on the grounds of excluding non-industrial uses were upheld by the Town Planning Appeals Board. In response, the then Town and Regional Planning Commission formally requested Council during 1984 to review the provisions of the Scheme regarding the retention of “Shops” as a Special Consent use within industrial zones in view of its policy regarding the use of industrial zoned land.

In submitting this request, the Commission noted that Council did not refuse a particular application on the grounds of “*amenity interference or increased traffic generation considerations, as, presumably, such factors were irrelevant, given the levels of amenity and traffic generation which the Scheme would acknowledge in such Industrial zones*” and that this was contrary to the provisions of the Town Planning Ordinance.

However, Council decided against amending the Scheme within the context of an increasing acceptance of the desirability of establishing mixed land use areas. Consequently, the establishment of non-industrial uses within industrial zones became viewed as being ‘necessary and desirable’ provided that it could be demonstrated that such uses did not interfere with the amenity of the surrounding area.

In addition, changing circumstances saw a reduction in the demand for industrial land in the city as a result of the termination of the benefits granted under the former Regional Industrial Development Plan (RIDP) and the closure of a number of industrial concerns in the city. The latter was also precipitated by the removal of some tariff protections since 1994 as a consequence of South Africa's open participation in the world economy and the requirements of the World Trade Organisation.

The last 15 to 20 years has also seen the introduction of the concept of 'factory shops' within industrial areas and many wholesalers have effectively become retail enterprises. This has led to a blurring between the nature of uses currently found within business and industrial zones in the city. However, records indicate that the majority of the commercial uses currently operating within the industrial zones have never been authorized.

As it would be both impossible and undesirable to try and reverse this situation, the General zone was introduced into the scheme wherein light industrial business and office uses are expressly permissible and portions of the Central Area industrial zones were rezoned by Council accordingly. Although it was intended that the "General" zoning would be extended to other parts of the city's industrial zones, such as the **application site**, this was never initiated by Council.

Having regard to;

- the applicant's desire not to preclude the possible future use of the property for some of the uses that are expressly permitted in terms of the current zoning, particularly "Light and Service Industrial Buildings" and "Service Workshops", whilst enabling appropriate additional uses such as "Business Premises" and offices to become expressly permissible;
- the nature and character of the existing surrounding development, particularly the mix of residential and industrial uses to the east and west of the **application site**
- the locational attributes of the **application site** which facilitates a mixed industrial, commercial and office development; and
- the process that has seen the industrial areas of Allandale and Failsworth Road become more mixed use zones,

the current "General Industrial" zoning of the **application site** is no longer considered to be suitable and the most appropriate alternative zoning is considered to be General" purposes.

The significant changes resulting from the adoption of the proposed rezoning to "General" purposes will be that a "Noxious Industrial Building" will become a prohibited use; uses classified as being an "Industrial Building" (heavy industrial type uses) will require Council's Special Consent; whilst uses such as a "Business Premises", "Dwelling", "Flat", "Residential Building", "Restaurant", "Shop" and "Specialised Office" would become expressly permissible on the **application site** rather than being permitted by Council's Special Consent in terms of current "General Industrial" zoning.

The changes relating to a "Noxious Industrial Building" and "Industrial Building" are considered to be beneficial with respect to maintaining the amenity of the occupants of the adjacent residential uses in Panorama Gardens.

(iv) **Desirability of developing a commercial centre on the application site**

The proposed commercial centre should be viewed within the overall context of a retail system which is "*never static, in a state of equilibrium, or even tending to an ultimate stage of development, but is rather constantly adjusting to more efficient and effective methods of operation*" (Metropolitan Pietermaritzburg Retail Study – Khan , Mark Puttick & Associates, Integrated Planning Services : 1993).

The changes in the retail system are viewed as being the result of a normal process of evolution that responds to variations of; the population, the distribution of consumers, shopping habits and tastes and the requirements of business operations.

It was recognised that this process leads to totally new centres being built in new and often better locations. The combination of new centres, expanded centres and revitalised older centres and enterprises leads to a rich mix of complementary retail activities being continually available to consumers.

In this regard, the proposed commercial centre is intended to be a focused or speciality centre which will potentially include tenants such as a hypermarket, furniture store, discount department store, and hardware/building supplies in addition to line shops. This would be complimentary to other retail centres serving the northern suburbs.

The Metropolitan Pietermaritzburg Retail Study, which was adopted by Council as a policy document, recommends that the need and desirability of developing retail centres and uses be specifically evaluated in terms of four sets of criteria pertaining to Customer, Agency (investors and developers) and Planning or Local Authority needs.

The following evaluation of the proposed commercial centre has been undertaken in terms of the four sets of criteria which are listed in Annexure 6 of the Retail Study.

Customer Needs

(i) Location of the centre in relation to target market

The primary catchment or target trading area is seen as being the residents of portions of Panorama Gardens, Beacon Hill, Eastwood, Glenwood, Tembalihle, Copesville, Haniville, Raisethorpe and Northdale as well as employees of industrial and commercial uses located in the adjoining Willowton and Allandale Industrial Estates.

As the proposed centre is situated adjacent to existing and proposed residential uses it will be within a 1.5 km walking distance of a significant portion of the primary catchment.

(ii) Accessibility from major roads serving the target market

The location of the proposed commercial centre on an erf that will be defined by Birmingham Road, Navan Boulevarde and the proposed access road into the Panorama Business Park off Birmingham Road will ensure that it is easily accessible.

In this regard, Birmingham Road forms an important cross link between Bhambatha Road (New Greytown Road/R33) and Chief Mhlabunzima Road and connects directly into Allandale Drive which in turn provides a further cross linkage between Bhambatha Road and Chota Motala Road (Old Greytown Road). Bhambatha, Chief Mhlabunzima and Chota Motala Roads are the three main arterial roads serving the north eastern sector of the city and also provide short direct linkages to the N3 Freeway.

Navan Boulevard is also the primary access collector road serving the Panorama Gardens residential development and provides an alternative link between Birmingham and Chief Mhlabunzima Roads.

(iii) Potential of the site to facilitate the development of a range of commercial and related uses

The proposed 4 hectare site for the commercial centre is regarded as being appropriate to accommodate the proposed commercial centre as well as other potential related uses and allow for some expansion should this be required to serve a growing population in the future.

(iv) Potential of the site to facilitate the adequate provision of parking

The potential area required for parking has been calculated on the basis of a ratio of 1,2 m² of gross parking per 1 m² of gross floor space in accordance with the town planning scheme requirements for suburban retail centres and provision could also be made to accommodate a taxi parking area if required.

(v) Quality of the environment of the site

Whilst the site of the proposed commercial centre is not currently considered to have a high degree of environmental quality or amenity, it is contended that the amenity of both the proposed erf and the parent **application site** will be substantially improved by the development of the proposed commercial centre and the Panorama Business Park with associated landscaping.

The environment of the proposed centre is also intended to offer patrons the opportunity to shop in pleasant and safe surroundings which will be comparable to that of other similar types of retail centres located within the Municipality.

Agency Needs

The site of the proposed commercial centre is regarded as meeting the following agency requirements;

- location in an area which is relatively safe and secure;
- potentially available in the short term, subject to the granting of environmental authorisation for the proposed business park and the approval of an application to subdivide the property and amend the town planning scheme;
- large enough to enable an appropriately sized centre to be developed;
- space which allows for some potential expansion to cater for the growth of the trade area;
- good accessibility from the potential trading area;

- good accessibility for service and delivery vehicles;
- good visibility from the surrounding major road network;
- complementary to other existing local shopping facilities serving the area;
- few constraints on construction and the availability of infrastructural services; and
- a site which could be developed with minimal environmental complications.

These attributes have already led to potential tenants canvassed by the applicant expressing an interest in leasing space in the centre.

Local Authority Needs

(i) Impact on existing infrastructural services

Sukuma are of the view that the existing infrastructural services have the capacity to accommodate the proposed commercial centre and the balance of the proposed Panorama Business Park.

(ii) Whilst the development will alter traffic movements around the site, the transportation study has concluded that the traffic can be accommodated by the existing road network provided that the measures detailed in **section 3.7.6** above are implemented at the intersection of Bhambatha/Birmingham Roads and the new intersection between Birmingham Road and the proposed Panorama Business Park access road.

(iii) Requirements for the public sector to upgrade infrastructural services

The Municipality will not be required to undertake any unplanned upgrading of the infrastructural services.

(iv) Impact on environment and surrounding land use activities

It is contended that the proposed development of a commercial centre will lead to an improvement of the environmental quality of the parent **application site** and have a positive impact on its environs.

Planning Needs

The proposed development of a commercial centre on the **application site** is viewed as having the potential to:

- Improve the investment climate in an area which is currently under-utilised.
- Contribute to the attainment of the development principles identified in the IDP relating to:
 - Compaction - by making more efficient use of an urban infill site and existing infrastructure;
 - Integration - by facilitating the development of a greater mix of land use activities;

- Restructuring the city - by providing residents of the city's northern suburbs with a wider range of easily accessible uses and services;
- Providing an upgraded entrance into Panorama Gardens which will help to provide this portion of the city with a greater sense of place.

5 IMPACT ON AMENITY

The term 'amenity' is regarded as being the quality or condition of an area which contributes to its pleasantness and enjoyment.

The criteria that have been established by the former Town Planning Appeals Board through the hearing of appeals are generally used to assist in evaluating the potential interference that a proposed use could have on the current level of amenity of the surrounding neighbourhood. These include the introduction of 'foreign' uses or activities, increase in vehicular traffic, noise generated and any nuisance of a substantial nature.

The existing amenity of the **application site** and its immediate environs is characterised by a mix of business and industrial activities and residential uses. The environment associated with these activities is currently dominated by the industrial buildings located off Birmingham Road with associated surfaced parking and service areas which contains limited landscaping.

It is contended that the proposed development of the proposed Panorama Business Park on the **application site** will not interfere with the amenity of the surrounding neighbourhood for the following reasons:

- (a) it will not introduce any 'foreign uses' into the area and will be fully compatible with the industrial uses located off Birmingham Road;
- (b) it will have considerably less impact on the residential amenity of the properties located in Panorama Gardens to the east of the **application site** than a large scale industrial use that is currently expressly permissible in terms of the "General Industrial" zoning;
- (c) the traffic assessment has confirmed that the associated traffic movements can be accommodated by the existing road network provided minor improvements are effected;
- (d) very little of the additional traffic generated by the proposed development is anticipated to route through Panorama Gardens residential area;
- (e) the noise associated with the operation of the proposed development is unlikely to exceed the current ambient level;
- (f) the wetland study found that the **application site** has a low in situ biodiversity with respect to flora and fauna; and
- (g) the buildings in the portion of the proposed Panorama Business Park that forms the interface between the **application site** and the residences in Panorama Gardens will be set on platforms that are significantly lower than these dwellings, thereby not unduly impacting on any views and vistas currently enjoyed by residents, whilst any other visual impacts can be further mitigated by employing measures such as appropriate screening where necessary.

In addition, it is contended that the proposed development will assist in upgrading the amenity and improve the environmental quality of the interface zone between the Willowton Industrial Estate and Panorama Gardens.

6 LAYOUT DESIGN

The design of the layout was informed by biophysical factors and engineering and environmental considerations. The primary determinants of the design of the layout were the land form, the limitation of having a single access point off Birmingham Road, the road servitude providing access to the Afrisam Quarry and the central watercourse which would require a 15 metre buffer and be limited to being traversed by a single road crossing if left running within an open channel.

A number of alternative layout designs were prepared and incrementally evaluated by members of the applicant's professional team. The sequence of the evaluation process was to firstly optimise the overall structure and the location and shape of the proposed commercial centre in relation to the land form and the existing road system.

This was followed by the integration of potential open spaces, which were defined on the basis of; having the central drainage channel piped in accordance with the recommendation of Alletson Ecologicals or left running in an open channel; the incorporation of stormwater retention ponds; and observing a 15 metre buffer around the open channel and retention ponds.

The boundaries of the individual erven were then determined on the basis of providing a range of site sizes, minimising the earthworks that would be required to establish future building platforms and facilitating an appropriate development that would be able to observe the town planning scheme requirements for spaces around buildings and on-site parking.

Two preferred layouts were generated through the evaluation process, termed Alternatives A and B, which are attached as **Appendices 'C1' and 'C2'** of the BAR. Alternative A is structured around the piping of the central drainage channel between the two proposed stormwater retention ponds whilst Alternative B leaves the channel open between these two ponds. Although Alletson Ecologicals had proposed a potential third pond, located to the west of the road servitude serving the Afrisam Quarry, the subsequent calculation of stormwater flow by Sukuma has indicated that this would not be necessary.

Both alternatives make provision for a 4 hectare site, framed by Birmingham Road, Navan Boulevard and the proposed access into the Panorama Business Park, in order to accommodate the proposed commercial centre. The reserve of the proposed access road adjacent to the proposed centre has been widened to 20 metres in accordance with the recommendations of the traffic assessment.

The location of the proposed centre at the entrance to the proposed Panorama Business Park has been determined on the grounds of; ensuring that it is easily accessible from the surrounding road system; avoiding the routing of extraneous traffic through the balance of the business park; and, being located on gently sloping topography, minimising the potential earthworks required for the construction of large volume commercial buildings and associated parking areas.

The location of the proposed commercial centre is also regarded as contributing to the establishment of an acceptable interface between the proposed development and the residential uses in Panorama Gardens. In this regard, the Panorama Primary School fields are seen as affording an appropriate buffer between the proposed commercial centre and the school classrooms.

No provision is made for access to be taken off the existing road servitude serving the Afrisam Quarry in either alternative as the location of the intersection of this servitude with Birmingham Road has been deemed by the Municipal Transportation section to be unsafe with respect to road safety requirements.

Both alternatives make provision for a religious site to be located adjacent to the western stormwater retention pond in order to accommodate an Ashram in accordance with the applicant's requirements. The retention pond is viewed as being a potential environmental amenity that can be enjoyed by members of the Ashram.

The main features and components of the two layouts are as follows:

6.1 **Alternative A**

6.1.1 General Erven

The layout makes provision for a total of 37 erven to be zoned for "General" purposes which includes the 4 hectare site for the commercial centre. The balance of the 36 erven have a combined site area of about 64 130 m² with individual sizes ranging between 4 128 m² and 1 367 m². The larger sites are generally located on steeper sloping topography in order to ensure that the associated additional site and earthworks that will be required to form access ways and building platforms can be easily accommodated.

6.1.2 Movement System

Good accessibility and mobility for private, commercial and emergency vehicles is provided by a looped private road system that is linked to Birmingham Road. The road reserves, including the cul-de-sac, are generally 18 metres in width except for the access road along the frontage of the commercial centre which is 20 metres in order to accommodate dedicated turning lanes in places in accordance with the recommendations of the traffic assessment. The cul-de-sac has a 30 metre wide turning head in accordance with the requirements to accommodate the turning movements of large industrial vehicles.

6.1.3 Community Facilities

In addition to the commercial centre which has the potential to accommodate a range of community facilities, the layout makes provision for a 2 473 m² erf zoned for "Religious Purposes" in order to accommodate the proposed Ashram.

6.1.4 Open Space

The layout makes provision for two erven, with a combined area of about 9 960 m² to be reserved for "Private Open Space Purposes". These erven are intended to accommodate the proposed two retention ponds that form part of the stormwater management system and will be landscaped accordingly and managed and maintained by an owners' association.

6.1.5 Maintenance and Management

An owners' association, with membership being restricted to, and compulsory for, all owners of erven in the Panorama Business Park will be formed to manage and maintain the open spaces and the road system together with any other reticulated services that are not taken over by the Municipality.

The owners' association could also be given powers to require the owners of erven to observe a building design code, landscaping requirements and use and conduct requirements via the articles of association. This could assist in facilitating the practical implementation of measures recommended as part of any required Environmental Management Plan.

6.2 **Alternative B**

6.2.1 General Erven

The layout makes provision for a total of 34 erven to be zoned for “General” purposes which includes the 4 hectare site for the commercial centre. The balance of the 33 erven have a combined site area of about 58 900 m² which is about 5 230 m² less than Alternative A due to the increased area of open space and different road layout. Individual erven have areas ranging between 4 128 m² and 1 334 m². As in the case of Alternative A, the larger sites are generally located on steeper sloping topography in order to ensure that the associated additional site and earthworks that will be required to form access ways and building platforms can be easily accommodated.

6.2.2 Movement System

Due to the limitation of having a single road crossing over the open central drainage channel, the private road movement system has had to include three culs-de-sac which does not offer the same level of accessibility and mobility for private, commercial and emergency vehicles as provided for in Alternative A.

As in the case of Alternative A, the road reserves are generally 18 metres in width except for the access road along the frontage of the commercial centre which is 20 metres in order to accommodate dedicated turning lanes in places in accordance with the recommendations of the traffic assessment. The three culs-de-sac have a minimum 30 metre wide turning head in accordance with the requirements to accommodate the turning movements of large industrial vehicles.

6.2.3 Community Facilities

In addition to the commercial centre which has the potential to accommodate a range of community facilities, the layout makes provision for a 2 405 m² erf zoned for “Religious Purposes” in order to accommodate the proposed Ashram. This is slightly smaller than the religious site provided for in Alternative A.

6.2.4 Open Space

The layout makes provision for a central open space system that accommodates the central drainage channel and an associated 15 metre wide buffer. This open space system is split into two erven, with a combined area of 15 725 m² and will be reserved for “Private Open Space Purposes”. The open space system is intended to form part of the stormwater management system and accommodate the two proposed retention ponds as in the case of Alternative A. The open space system will be appropriately landscaped and managed and maintained by an owners’ association.

6.2.5 Maintenance and Management

As in the case of Alternative A, an owners’ association, with membership being restricted to, and compulsory for, all owners of erven in the Panorama Business Park will be formed to manage and maintain the open spaces and the road system together with any other reticulated services that are not taken over by the Municipality.

The owners’ association could also be given powers to require the owners of erven to observe a building design code, landscaping requirements and use and conduct requirements via the articles of association. This could assist in facilitating the practical implementation of measures recommended as part of any required Environmental Management Plan.