Western Cape Government
Environmental Affairs and Development Planning

MINISTRY OF LOCAL GOVERNMENT, ENVIRONMENTAL AFFAIRS AND DEVELOPMENT PLANNING

14/3/1/B4/45/0356/18

The Head of Department
Department of Transport and Public Works
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Attention: Mr Schalk Carstens

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Dear Mr Carstens

APPEALS LODGED IN TERMS OF SECTION 43(2) OF THE *NATIONAL ENVIRONMENTAL MANAGEMENT ACT, 1998 (ACT NO. 107 OF 1998)* AGAINST THE ENVIRONMENTAL AUTHORISATION GRANTED FOR THE PROPOSED UPGRADE OF THE R44 ROAD BETWEEN SOMERSET WEST AND STELLENBOSCH ON ERVEN 169 AND 177, REMAINDER OF FARM NO. 537, FARM NO. 537/6, FARM NO. 537/7, FARM NO. 537/13, 537/18 AND FARM NO. 537/20, REMAINDER OF FARM NO. 536, REMAINDER FARM NO. 539/1 AND PORTION 2 OF FARM NO. 540, STELLENBOSCH

1. The appeals lodged against the Environmental Authorisation ("EA") granted on 29 March 2018 for the above proposed development (Annexure 1), refer.

2. After careful consideration of all the appeals, as well as supporting documentation received, I have decided in terms of section 43(6) of the *National Environmental Management Act*, 1998, ("NEMA") to vary the abovementioned decision of the competent authority granted on 29 March 2018 and partially dismiss the appeals.

3. The original Environmental Authorisation granted on 29 March 2018 and the conditions under which the authorisation was granted are still valid, however Condition E2 and section F of the abovementioned EA are excluded from this authorisation. Conditions E1, E3 and E7 and the description of the alternatives authorised under "B. LIST OF ACTIVITIES AUTHORISED" (Page 6 of the original EA) are amended to read as follows:-

Condition E1:

*"This environmental authorisation is valid for a period of **ten years** from the date of this Appeal decision. The holder must commence with the listed activities within the said period or this environmental authorisation lapses and a new application for environmental authorisation must be submitted to the competent authority. If the holder wishes to extend the validity period of the environmental authorisation, an application for amendment in this regard must be made to the Competent Authority prior to the expiry date of the environmental authorisation."*

Condition E3:

"The holder of the authorisation must in writing, within 12 (twelve) calendar days of the date of the appeal decision notify all registered Interested and Affected Parties ("I&APs")–

3.1 The outcome of the appeal;

3.2 The reasons for the appeal decision; and

3.3 The date of the decision."

Condition E7:

"The draft Environmental Management Programme ("EMPr") submitted as part of the application for environmental authorisation is hereby approved and must be implemented on condition that:

7.1 All the measures recommended in the specialist studies and the Revised Final Basic Assessment Report conducted to inform the basic assessment process are included in the EMPr for implementation.

7.2 A layout plan is submitted which indicates two median openings along the R44 between Steynrust Road and Webbersvallei Road that will not be closed as they are deemed to comply with the Provincial Road Access Guidelines. These two median openings must not be closed to allow users to not travel long distances to their destinations.

7.3 The Amended EMPr is submitted to the Ministry responsible for environmental affairs in the Western Cape Province (e-mail: DEADP.Appeals@westerncape.gov.za or Marius.Venter@westerncape.gov.za).

The Maintenance Management Plan ("MMP") submitted as part of the application for environmental authorisation is herewith adopted in terms of the NEMA EIA Regulations, 2010 relating to GN No. R. 544, Activity 18 and the NEMA EIA Regulations, 2014 (as amended) relating to Activity 19 of GN No. R. 327.

The EMP and MMP must be included in all contract documentation for all phases of implementation.

Should any amendments to the EMP or MMP be required before an audit is required in terms of this environmental authorisation, the applicant must:

- *notify the competent authority of its intension to amend the EMP at least 60 days prior to the submission of the application for amendment to the EMP;*
- *obtain comment from potential I&APs, including the competent authority, by using any of the methods provided for in the NEMA for a period of at least 30 days; and*
- *submit the amended EMP to the competent authority for approval within 60 days of inviting comments on the proposed amendments."*

The description of the alternatives authorised under ***"B. LIST OF ACTIVITIES AUTHORISED"***

"……..

The project scheme consists of the following:

- *Closing all median openings along the R44 between Steynsrust Road and Webersvallei Road except for two median openings (that must be indicated and submitted in layout plan required in terms of Condition E7.2) deemed to comply with the Provincial Road Access Guidelines to allow users to not travel long distances to their destinations.*
- *Providing a grade-separated U-turn facility at Steynsrust Bridge as per the layout alternative contained in* ***Annexure 2.***
- *Providing a left in/left out access to Bredell Road as per the layout alternative contained in* ***Annexure 3.***
- *Providing an above-ground grade-separated turning facility at Winery Road as per the layout alternative contained in* ***Annexure 4.***
- *Providing a below-ground grade-separated turning facility at Annandale Road as per the layout alternative contained in* ***Annexure 5.***
- *Providing a turning facility close to Jamestown by accommodating U-turn movements at the Webersvallei Road signalised intersection.*
- *Improving at-grade signalised intersections within the Stellenbosch municipal area between Webersvallei Road and the end of the project at Van Rheede Street. This would entail road widening to provide turning lanes and three through lanes in each direction at the following five intersections:*
  - *o Webersvallei Road (km 29.6);*
  - *o Techno Park Road (km 30.3);*
  - *o Blaauwklippen Road (km 31.2);*
  - *o Trumali Road (km 32.0); and*
  - *o Van Rheede Road (km 32.9).*

- *Additional safety measures:*
  - *o Implementing average speed over distance (ASOD) control; and*
  - *o Accommodating pedestrian and cycling facilities in the interchange design."*

4. The abovementioned EA and the conditions under which the authorisation was granted must be complied with.

5. **REASONS FOR THIS APPEAL DECISION:**

The reasons for partially dismissing the appeals and varying the EA are contained in the EA. Below find further reasons for partially dismissing the appeals and varying the decision of the competent authority:

Background

5.1 The EA was not granted by the Director: Environmental Governance. It was granted by the delegated Director: Development Management (Region 2) of the Department of Environmental Affairs and Development Planning ("DEA&DP").

The information before the decision-maker did not establish the need and desirability of the development

5.2 The 2014 EIA Regulations require the competent authority to consider the need and desirability aspects of the proposed activity when an application for an EA is submitted for consideration.

5.3 The DEA&DP's Guideline on Need and Desirability states that the consideration of "*need and desirability*" in EIA decision-making requires consideration of the strategic context of the development proposal along with the broader societal needs and the public interest. As a result, the need and desirability aspects were dealt with in the BAR as follows.

5.4 The study area falls within the planning jurisdiction of the City of Cape Town's Helderberg District, Cape Winelands District Municipality and Stellenbosch Municipality. Planning frameworks in the relation to the provincial, district and local municipality levels relevant to the proposed project are discussed below.

5.5 The Provincial Spatial Development Framework for the Western Cape intends to create an integrated social, economic and environmental framework for the province. It aims to "*... align the future settlement pattern of the province with the location of environmental resources and economic opportunities*". It has a further objective to "*Restructure road networks to promote economic activity in appropriate locations*". Within this context, the Stellenbosch Winelands have been identified as potential economic development locations in relation to the agricultural and tourism industry.

5.6 Programme 3 of the Western Cape Government: Department of Transport and Public Works Strategic Plan (2010- 2014) states the following:

5.6.1 *"Roads infrastructure promotes accessibility and the safe affordable movement of people, goods and services through the delivery and maintenance of road infrastructure that is sustainable, integrated and environmentally sensitive, and which supports and facilitates social and economic growth through socially just, developmental and empowering processes. About 75% of the surfaced road network in the province is older than the normal design lifespan of 25 years. This not*

only places a serious maintenance burden on the road authority but also detrimentally affects road safety because of design standards inappropriate for the nature of the traffic on the roads. Roads and bridges are assets that have to be managed and maintained like all other assets and this includes planning to renew or replace an asset when it reaches the end of its economical lifespan."

5.6.2 The R44 falls within the DTPW's road network which must be maintained and managed. As such, the DTPW is proposing to undertake the necessary work to improve the road network in terms of safety and levels of service.

5.7 The City of Cape Town's Integrated Development Plan ("IDP") has inter alia outlined the above. following objectives:

5.7.1 Create an enabling environment to attract investment that generates economic growth and job creation.

5.7.2 Provide and maintain economic and social infrastructure to ensure infrastructure-led economic growth and development.

5.7.3 Promote a sustainable environment through the efficient utilisation of resources.

5.7.4 Ensure mobility and access through the implementation of an effective public transport system.

5.7.5 Leverage the City of Cape Town's assets to drive economic growth and sustainable development.

5.7.6 Maximise the use of available funding and programmes for training and skills development.

5.7.7 Over the next five years, the City of Cape Town will be investing in many major infrastructure projects. This includes the rehabilitation and reconstruction of metro roads.

5.7.8 Provide a good road-based transport network which calls for a well-developed, well-maintained and well-functioning road and street network. The operation and maintenance of this network greatly affect the efficiency of transport of people and goods into and within the City of Cape Town.

5.7.9 Programme 1.2(b) of the City of Cape Town IDP relates to the maintenance of infrastructure: *"Investment in the maintenance and expansion of essential utilities and services, such as ... roads ... and transport infrastructure, is fundamental to improve services and quality of life for all citizens as well as to encourage local and foreign investors to invest in other economic infrastructure as well."*

5.7.10 The improvements proposed along the R44 forms part of the maintenance of the road-based transport network as it would facilitate economic growth and development.

5.8 The City of Cape Town's Spatial Development Framework ("SDF") sets out, amongst others, the following development principles:

5.8.1 The public good should prevail over private interests.

5.8.2 All residents should have equal protection and benefits, and no unfair discrimination should be allowed.

5.8.3 Encourage local, national and international connectivity.

5.8.4 Improve urban efficiency and align planned growth with infrastructure provision.

5.8.5 Offer maximum access to the city's opportunities, resources and amenities, and redress spatial imbalances in this regard as far as possible.

5.8.6 The R44 is defined as a tourism/visual gateway which falls under the economic action priority areas. Policy 50 advocates the promotion of accessible, citywide destination places, amongst others the Somerset West Winelands. The policy guideline statement includes that: *"land use management decisions must protect and enhance existing and potential destination places, including access to these places."*

5.9 The City of Cape Town Integrated Transport Plan (2013 – 2018) states the following:

5.9.1 The 2011 Integrated Transport Plan ("ITP") update states the following: the road network forms an integral part of the greater transportation network. It is the public right of way system by means of which most of the City's transportation needs are met. These needs include the movement of people and goods. People movement includes trips between home and work, educational trips, business trips, as well as recreational trips for social activities. An urban area that is lacking in a good road network will suffer economically and socially. Coupled with land use planning in intricate dynamic relationship, the road network influences and is influenced by the structure of any major urban area.

5.9.2 The focus of the Transport Infrastructure Strategy is on the provision of new infrastructure for the expansion of the Public Transport System, while maintaining the road network for private cars and freight logistics. It is important to ensure that the integrity of the road network, used by public transport integrity of the network is maintained without increasing its capacity. Car-based road infrastructure upgrades happen gradually over time by adding additional capacity when demand exceeds what is available. The balance between supply and demand can therefore be restored frequently.

5.9.3 One of the objectives of the City of Cape Town ITP (2013) is *"to facilitate a fully integrated and well-maintained infrastructure network along with related facilities, and to manage and enable the utilisation of this major asset appropriately and effectively."*

5.9.4 The R44 within the City of Cape Town boundaries is an expressway in the ITP. It is not included under the list of scenic routes.

5.10 The City of Cape Town Environmental Management Framework states the following:

5.10.1 Strategy 1 of the City of Cape Town's Helderberg District Plan (consisting of a SDF and an EMF) relates to the reinforcement "... *of the primary accessibility grid: Strengthening the connection to the coast via the R44*/Broadway ... as development routes."

5.10.2 The transport infrastructure and route designation indicates Broadway Boulevard (the section of the R44 stretching from Strand to just beyond Steynsrust Road) as one of the routes in the district that should be developed. It stated the following in support of the proposed development:

5.10.3 These routes should continue to perform a primary mobility function. Their role as structuring routes providing improved access and movement continuity between districts and between distant work and living areas should be reinforced.

5.10.4 The process of land use intensification along these routes must consider the nature of access roads, additional traffic impacts and parking requirements.

5.10.5 Direct access onto these routes from abutting properties is not supported. Instead, limited access, with a focus on high access nodal points, should be permitted, and where the necessary service roads should be developed.

5.10.6 Mitigation of the impact of the road's dominant mobility function (including design efforts to slow traffic) may be appropriate at high intensity nodal areas. The route between these nodes should remain primarily mobile orientated through residential areas, with appropriate landscaping and adherence to the boundary walls policy.

5.10.7 The proposed closure of the median openings and of certain private accesses is in line with the above policies of the City of Cape Town.

5.11 The Cape Winelands District Municipality IDP and SDF states the following:

5.11.1 The aim of the Cape Winelands District Municipality IDP is for "*all structures of the Cape Winelands to co-operate together towards effective, efficient and economically sustainable development*". To reach this broad development goal, the Cape Winelands District Municipality has set the following six strategic objectives:

5.11.1.1 To facilitate the development of sustainable regional land use, economic, spatial and environmental frameworks that will support and guide the development of a diversified, resilient and sustainable district economy.

5.11.1.2 To ensure the health and safety of communities in the Cape Winelands through the proactive prevention, mitigation, identification and management of environmental health, fire and disaster risk.

5.11.1.3 To support and ensure the development and implementation of infra-structural services such as bulk and internal services, functional road network and public transport services that contribute to integrated human settlements in the Cape Winelands District Municipality.

5.11.1.4 To provide an effective and efficient support service to the Cape Winelands District Municipality's executive directors so that the organisational objectives can be achieved.

5.11.1.5 To facilitate and ensure the development and empowerment of the poor and most vulnerable people, particularly women, children, youth, the disabled, elderly persons and rural dwellers throughout the Cape Winelands.

5.11.1.6 To ensure the financial sustainability of the Cape Winelands District Municipality and to fulfil the statutory requirements.

5.11.2 The Cape Winelands District Municipality SDF forms an integral component of the IDP. It's fifth objective is to promote the concentration and intensification of human and economic activities within the current land footprint and in areas of high accessibility.

5.11.3 The proposed improvements along the R44 would meet some of the strategic objectives of the IDP and SDF.

5.12 The Cape Winelands District Municipality Environmental Management Framework states the following:

5.12.1 The Cape Winelands District Municipality Draft Environmental Management Framework defines scenic/ historic routes which should be preserved in the Winelands. It includes the following from the City of Cape Town's Scenic Drive Network Management Plan: Consideration should be given to the following to enhance the aesthetic appearance of the scenic routes:

5.12.1.1 Preservation of the natural environment, conformance with the character of the area traversed, natural roadside appearance and vegetation cover appropriate to locality.

5.12.1.2 Curvilinear horizontal alignments and gently rolling profiles with a minimisation of cut and fill and the adoption of curvilinear profiles rather than steep sided slopes and squared shoulders.

5.12.1.3 Use of natural materials for street furniture and roadside walling.

5.12.2 The Environmental Management Framework does not list the R44, amongst these routes, thus the Scenic Drive Network Management Plan is not applicable.

5.13 The previous Stellenbosch Municipality IDP states the following strategic objectives:

5.13.1 Stellenbosch should be placed as the most preferred town for investment and business. Business and investment inflows translate into jobs and prosperity.

5.13.2 The Greenest Valley that will not only make Stellenbosch even more attractive for visitors and tourists but also provide a base for new industries.

5.13.3 Dignified living that will ensure that citizens own their town, take pride in it and have a sense of self-worth and belonging.

5.13.4 A safer Stellenbosch that will put civic pride and responsibility in place of crime and procedures that are mandatory and is the hallmark of a well-run municipality.

5.13.5 Provide an appropriate transport network and well-maintained road infrastructure by initiating plans, studies and projects based on the Comprehensive Integrated Transport Plan for Stellenbosch.

5.13.6 Implement the critical maintenance and rehabilitation projects from the Pavement Management System.

5.13.7 Endeavour to improve traffic flow through Stellenbosch: Implement the critical recommendation of Traffic Signal Optimisation Study.

5.13.8 The proposed project provides support for these objectives insofar as the project is network related and provides necessary infrastructure which will be easy to maintain.

5.14 The Stellenbosch Municipality SDF states the following:

5.14.1 The Stellenbosch SDF lists Jamestown and Raithby as potential development nodes. The formalisation of the second access road to Jamestown may add further development pressure on the R44 south of this access road. Development at Raithby would add further additional traffic to Winery Road. Winery Road is currently being upgraded, however a safe and functional intersection is needed at the R44 to serve the village of Raithby and all other residents along Winery Road.

5.14.2 The SDF further states that "*... potential ... Tourism Development Areas and Tourism Routes should also be indicated spatially. Roads relevant to tourism which require upgrading or construction should be identified in the IDP and SDF and forwarded to the province for inclusion in the Strategic Infrastructure Plan. It is also noted that the main arterial roads connecting the major settlements in the surrounding region play a key role in establishing the municipality's sense of place because of the views that they offer, the experience of travelling along them and the nature of their detailed design. Therefore, these roads should be treated carefully and their designs kept in a sensitive way to reduce traffic skids, retain their winding nature and fully maintain their surface treatments and curvages in order to promote tourism and keep their scenic beauty.*"

5.15 The Stellenbosch Municipality Comprehensive Integrated Transport Plan states the following:

5.15.1 The objectives of the Stellenbosch Municipality's Comprehensive Integrated Transport Plan include "*[t]o develop a comprehensive and integrated plan relating to the regulation, provision and management of transport infrastructure (roads, stations and public transport facilities) and for regulating public transport operations and the use of infrastructure by both operator of public transport and private travellers.*"

5.15.2 The Comprehensive Integrated Transport Plan lists the R44 as a major feeding off the national routes (N1 and N2). It states that there are approximately 56 ha of land which has been identified for development to the western side of the R44. These developments include the municipal land on which the Stellenbosch Airfield is located and land at the entrance to Techno Park. Further development has taken place between the De Zalze Golf Estate and the envisaged Spier development where some of these "*developments will have their entrance and access point from the R44, the Allendale Road and not the R310 as the current developments of Spier has at the moment. The impact thereof on future traffic patterns and volumes will have to be measured in time to cater for any new infrastructure that might be needed.*"

5.15.3 It is thus anticipated that the intersection at Annandale Road and the R44 would in the future become busier than it is currently. It is important to plan for future developments in any road infrastructure upgrades.

5.16 The National Environmental Management Principles, contained in Chapter 1, section 2 of the NEMA, serve as guidelines by reference to which any organ of state must exercise any function when taking any decision in terms of the NEMA or any statutory provision concerning the protection of the environment. The NEMA principles state that for development to be sustainable, specific consideration of all relevant factors must occur, including the following:

5.16.1 Environmental management must place people and their needs at the forefront of its concern, and serve their physical, psychological, developmental, cultural and social interests equitably.

5.16.2 Development must be socially, environmentally and economically sustainable.

5.16.3 The disturbance of ecosystems and loss of biological diversity must be avoided, or, where they cannot be altogether avoided, are minimised and remedied.

5.16.4 Pollution and degradation of the environment must be avoided, or, where they cannot be altogether avoided, are minimised and remedied.

5.16.5 That a risk-averse and cautious approach is applied, which considers the limits of current knowledge about the consequences of decisions and actions.

5.16.6 Negative impacts on the environment and on people's environmental rights must be anticipated and prevented, and where they cannot be altogether prevented, are minimised and remedied.

5.16.7 Environmental management must be integrated, acknowledging that all elements of the environment are linked and interrelated, and it must consider the effects of decisions on all aspects of the environment and all people in the environment by pursuing the selection of the best practicable environmental option;

5.16.8 That social, economic and environmental impacts of the activities, including disadvantages and benefits, must be considered, assessed and evaluated, and decisions must be appropriate in the light of such consideration and assessment;

5.16.9 The environment is held in public trust for the people, the beneficial use of environmental resources must serve the public interest and the environment must be protected as the people's common heritage;

5.16.10 Sensitive, vulnerable, highly dynamic or stressed ecosystems, such as coastal shores, estuaries, wetlands, and similar systems require specific attention in management and planning procedures, especially where they are subject to significant human resource usage and development pressure; and

5.16.11 That the disturbance of landscapes and sites that constitute the nation's cultural heritage is avoided, or where it cannot be altogether avoided, is minimised and remedied.

5.17 The current IDP of the Stellenbosch Municipality for 2017 – 2022 states *inter alia* the following in terms of the road infrastructure:

5.17.1 As the population of Stellenbosch continues to grow, there is increased pressure on bulk infrastructure hence there must be an improvement of electricity network, water supply and capacity, wastewater treatment plants and the road network.

5.17.2 As part of the Provincial Sustainable Transport Program the Western Cape Department of Public Works, Roads and Transport identified Stellenbosch as a priority municipality for the development of a sustainable transport system. The emphasis will be the development of a public transport system and the development of infrastructure to improve non-motorised transport. However, the non-motorised transport is not the main aim of the current project.

5.17.3 Specific issues for amendment of the current SDF of the Stellenbosch Municipality include:

5.17.3.1 Amendment of the urban edges.

5.17.3.2 Adjustments to include the northern extension to Stellenbosch as per Council decision.

5.17.3.3 Adjustments to include the Jamestown housing development to the south of Jamestown.

5.17.3.4 Infill and development areas.

5.17.3.5 Major transport infrastructure.

5.17.3.6 New transport interchanges.

5.17.3.7 Institutional development and facilities.

5.17.3.8 Accommodation of the educational facilities linked to population growth.

5.17.3.9 Community facilities, e.g. catchment areas for indoor and other capital heavy sport facilities.

5.17.3.10 Spatial distribution of municipal offices, community facilities.

5.17.3.11 The upgrading of the R44 road.

5.17.4 Traffic congestion is one of the main concerns in the municipal area, together with the indicated lack of economic growth to counter the effects of the significant population growth in the predominantly lower income categories. The Municipality approved a Roads Master Plan for the period 2012-17, which plan is being reconsidered for the next period and will be aligned with the SDF. The Roads Master Plan is integrated with various other strategic plans, such as the Comprehensive Integrated Transport Plan, Non-Motorised Transport Plan and Integrated Public Transport Networks. It is essential to plan, manage and implement transportation infrastructure to ensure sustainable, economic and socially acceptable transport services to those living in the Stellenbosch Municipal area. The present road network fails to cope with the existing traffic, let alone the longer-term growth needs of the Stellenbosch area. This was particularly evident in the case of the higher order Provincial roads. It was acknowledged that some roads, particularly in the historic town area, will in future still operate at capacity during peak periods (unless modal shift changes). It should however be noted that the peak period traffic congestion could spread over a longer time interval because of unresolved capacity problems. The following road/system improvements, amongst others, are essential:

5.17.4.1 Van Rheede / Vrede Streets between the R44 and Piet Retief Street.

5.17.4.2 Van Rheede Street westbound extension to Techno Park linking into Electron Road.

5.17.4.3 Jamestown alternative access.

5.17.4.4 A non-motorised transport/public transport route along each of the major arterials (R44 North and South) from designated park and ride areas on the outer edges of the town.

5.18 The current Stellenbosch Municipality's SDF states *inter alia* the following:

5.18.1 Congestion has increased significantly in recent years, and most of the vehicles on the road are from within the municipality as opposed to those from outside. To reduce the number of cars on the road, a combination of non-motorized transport and public transport facilities is suggested. Adequate pedestrian and cycling infrastructure should be prioritised.

5.18.2 Where vehicle traffic acts as a barrier to non-motorised transport, road intersections need to be made safer for pedestrians, cyclists and the disabled to cross.

5.18.3 All regional roads should facilitate non-motorized transport (particularly cycling) by ensuring that shoulders are available and demarcated as cycling ways.

5.18.4 Tourism that reinforces the municipality's sense of place (e.g. agri-tourism, wine tourism and eco-tourism) should be encouraged in the settlements and on rural land outside the urban edge.

5.19 The National Land Strategic Transport Framework requires *inter alia* the following:

5.19.1 A much-improved sustainable public transport system with better and safer access, more frequent and better-quality services and facilities to an agreed standard.

5.19.2 Greater mobility options particularly for those who do not have a car.

5.19.3 Safer and easier cycling and walking.

5.19.4 A transport system that is consistent with the real needs of people living in different parts of South Africa and with differing abilities to afford travel.

5.19.5 Different travel patterns and transport usage and, where appropriate, reduced need to travel by motor vehicles from having achieved an integrated land use and transport system.

5.20 The Western Cape Provincial Land Transport Framework requires *inter alia* the following:

5.20.1 Non-motorised transport must be developed and implemented for each municipality of the Province.

5.20.2 Reduction of the road transport infrastructure backlog.

5.20.3 Reduction of the number of fatalities on the Western Cape roads.

5.20.4 Implementation of an integrated transport safety management system.

5.21 The Stellenbosch Comprehensive Integrated Transport Plan requires inter alia the following:

5.21.1 Upgraded infrastructure, reduction of congestion and improved public transport.

5.21.2 Safe and efficient public transport.

5.21.3 Shift to public transport and non-motorised transport and infrastructure to support sustainable development.

5.22 The proposed project is consistent with the abovementioned policies due to the following:

5.22.1 The project has aims to address the safety issues and level of service improvements along the R44 road between Somerset West and Stellenbosch.

5.22.2 Minor roads will be consolidated and median openings will be closed along the entire section of the road.

5.22.3 Sections of the road along the R44 will be improved including intersections of the R44 road with Steynrust Road, Bredell Road and Techno Park Road.

5.22.4 U-turn facilities will be introduced.

5.22.5 Grade-separated roundabouts will be done at Annandale Road and Winery Road.

5.22.6 Average speed over distance control will be implemented.

5.22.7 Pedestrian and cycling facilities will be accommodated at the roundabouts.

5.23 The abovementioned were considered in this EIA process and it is considered that the need and desirability aspects have been adequately addressed in the EIA information to adequately meet the requirements of the applicable EIA legislation.

5.24 The need and desirability aspects were also considered as follows:

5.24.1 The applicant is proposing safety and level of service improvements along Main Road 27 (R44) between Somerset West and Stellenbosch. The project study area extends from Steynrust Road (km 20.15) in Somerset West to Van Rheede Street (km 33.00) in Stellenbosch, a total distance of 12.85 km.

5.24.2 The R44 is predominantly a high-speed mobility corridor that forms a strategic link between Somerset West and Stellenbosch at a regional transport planning level. The road is a dual carriageway that has many intersections where side roads join unsignalised or signalised intersections- the latter being mainly where the R44 lies within the Stellenbosch municipal area. Many private properties abutting the R44 have direct access onto the R44. There are also many median openings which provide access between the two carriageways of the R44.

5.24.3 Over the past 20 years, significant traffic volume growth has been experienced on the R44 from approximately 2 000 vehicles per day in 1980 to nearly 30 000 vehicles per day presently, roughly a 5 % annual traffic growth rate. Because of the high traffic volume and growth, congestion along the route has increased with resulting increases in delays, queuing and a decrease in the level of service. There are many accidents taking place on the route and road safety is a key concern for commuters, the adjacent community and the applicant. It is also becoming increasingly difficult and dangerous to negotiate the numerous median openings and accesses, as well as right turns and the frequently observed U-turns across heavy opposing traffic volumes.

5.24.4 Development pressure along the R44 and in the adjacent areas has increased over the years and many new developments and land uses have been approved and developed. Many of the farms and businesses still have direct access to the R44 with median breaks at most of these locations along the road. The access spacing of most of the driveways and corresponding median openings are deemed to be substandard in terms of the Provincial Road Access Guidelines. These median openings are known to be highly dangerous from a traffic safety point of view as the slower moving right turning vehicles need to negotiate both carriageways with vehicles travelling at relatively high speed.

5.25 Kantey and Templer Consulting Engineers (Pty) Ltd was appointed by the applicant to investigate the current safety and level of service issues on the R44 and to undertake the design of the overarching R44 improvement project, where the following solutions were identified:

5.25.1 The closure of all median openings along this section of the R44.

5.25.2 The upgrade of the Steynrust, Bredell and Techno Road Intersections.

5.25.3 The provision of safe turnaround (U-turn) facilities by means of grade-separated roundabouts at the Winery Road and Annandale Road intersections.

5.25.4 The closure and/or consolidation and/or relocation of certain private accesses.

5.25.5 The provision of pedestrian and cycle facilities at the intersections.

5.26 General accident statistics indicate that most collisions occur at the signalised intersections where 2 – 3 accidents per million vehicles are recorded in comparison with the unsignalised intersections where 0.7 – 1.2 accidents per million vehicles are recorded. There are more collisions at traffic signals for many reasons but mainly due to motorists running red signal phase and turning on the inter-green phase of the signal.

5.27 As the traffic volume on the R44 has increased, intersections have become busier and farm and private access roads carry more traffic (e.g. related to wine cellars and restaurants), road safety has decreased and the number of accidents has increased. In 2013, 276 accidents were recorded along the affected length of the R44. Accident statistics for the major intersections are provided below:

5.27.1 Bredell/ Klein Helderberg Road- annual average accident rate of 9.2 of which 0.4 are fatal and serious.

5.27.2 Winery Road Intersection- the average accident rate is 6.8 per annum of which 0.7 are fatal and serious.

5.27.3 Annandale Road Intersection- on average 24.6 accidents occur per annum of which 0.9 is fatal and serious injury.

5.27.4 Techno Road Intersection- the average annual accident rate is 31.0 of which 1.1 are fatal and serious.

5.28 The R44 also serves as a mobility corridor between the N1 and N2. The next direct opportunity to cross between the N1 and the N2 towards Cape Town is the R310 to the west and after that the R300. From the provincial road network perspective, the mobility of this road section is important as it serves part of the link between Malmesbury and the N2. This mobility function is,

however, currently hindered by traffic congestion in the urban areas on either end of the route, especially through Stellenbosch and to a lesser extent through Somerset West. From a strategic perspective, the long-term mobility function of the route is thus also critical to the road network belonging to the applicant.

5.29 The proposed improvements would take place largely within the existing road reserve. Additional land would need to be acquired in some areas from private landowners.

5.30 Steynsrust Road lies within the urban edge for the Helderberg District of the City of Cape Town. The five signalised intersections earmarked for upgrading at the Stellenbosch end of the upgrade project from Webersvallei Road northwards fall within the urban edge of the Stellenbosch Municipality. The Bredell Road, Winery Road and Annandale Road Intersections fall outside the urban edge. The operational and service improvements proposed would not affect the urban edge.

5.31 The upgrading of existing road infrastructure is in line with the City of Cape Town, Cape Winelands District Municipality and Stellenbosch Local Municipality SDFs and IDPs.

5.32 The R44 road improvements are necessary to provide a safer road and improved levels of service.

5.33 The affected section of the R44 falls under the jurisdiction of the Western Cape Government: DTWP and not the relevant municipalities. Notwithstanding the above, the proposed project would not require changes to the infrastructure planning of the relevant municipalities.

5.34 The National Strategic Outcomes has, as a policy priority, 'an efficient, competitive and responsive economic infrastructure network'. The National Planning Commission includes the expansion of infrastructure as a strategic goal.

5.35 The proposed project would occur largely within an existing proclaimed road reserve and the land use would not change.

5.36 Very little remnant natural vegetation remains, the loss of which would result in a low significance impact. The affected freshwater features are all highly modified and some flow within concrete channels – impacts on the freshwater features would be of very low to low significance. One building of heritage significance would be lost at the Annandale Road Intersection. The cultural landscape would be highly impacted by the proposed improvements.

5.37 The significance of the impacts on the visual environment would range between insignificant and high, depending on the alternative selected. It is anticipated that the safety and levels of service improvements would have a positive impact on people's health and well-being.

5.38 Positive cumulative impacts include improved road safety and level of service.

5.39 Negative cumulative impacts include the urban type infrastructure added to the existing urban components in a rural or semi-rural area.

5.40 Due to its existing use as a road and since the proposed improvements would occur largely within the existing road reserve, the proposed project is considered the best practicable environmental option for this site. Areas where land acquisition would be required are situated adjacent to the road reserve. It is not anticipated that this would have a significant detrimental effect on the current agricultural operations.

5.41 The proposed project would provide a safer road and improved levels of service for commuters along the R44, tourists in the area and the local community. The road improvements would lead to less accidents along this stretch of road and reduce travel times.

5.42 It is anticipated that up to 100 employment opportunities would be available to people from the local communities during the construction phase. The Contractor would also contribute to the local economy for the duration of the contract period.

5.43 The general objectives of integrated environmental management were considered by considering all the potential negative and positive impacts of the proposed project on both the socio-economic and biophysical environments, which consisted of considering the various options for the intersection improvements during an initial screening exercise. The public has been given an opportunity to comment on the proposed project and were provided with many opportunities to actively participate in the Basic Assessment process. Minimisation of potential negative impacts and optimisation of potential positive impacts will be ensured by way of implementation of an approved EMPr.

5.44 The basic needs of the public were considered during the planning phase of the proposed project. The initial proposals for grade-separated roundabouts were refined during the EIA process. This resulted in a reduction of the land acquisition requirements and the immediate impact on the surrounding landowners.

5.45 One of the key principles in section 2 of the NEMA is that *"development must be socially, environmentally and economically sustainable"*. The proposed project would not result in any significant adverse impacts to the biophysical environment. In relation to the socio-economic environment, the situation is more complex and would require weighing up various benefits and dis-benefits of the proposed project.

5.46 Considering the above, the median openings along the R44 between Steynrust Road and Webbersvallei Road must be closed except for two median openings that are consistent with the Provincial Road Access Guidelines. These two median openings must not be closed to allow users to not travel long distances to their destinations.

Significant, permanent heritage and visual impacts that cannot be mitigated

5.47 The original Heritage Impact Assessment ("HIA") which was conducted by Dr Jason Orton of ACO and Associates in February 2014 stated *inter alia* the following:

5.47.1 The study area has a generally rural character, although the southernmost part is a built-up residential area. Agricultural fields, tree lines and farmsteads occur throughout the area and wine tasting, farm stalls and other tourist facilities are present in places. In terms of expected local heritage, Early Stone Age archaeological material, historical farm buildings, the agricultural landscape and local scenic routes are all relevant.

5.47.2 The earlier proposal for grade-separated roundabouts included slip lanes which would have resulted in far greater impacts to heritage resources, particularly at the

Annandale Road intersection. During the process the proposal was revised to reduce the impacts.

5.47.3 The survey yielded low density scatters or Early Stone Age artefacts with very low significance. However, on one farm (Ken Forrester Wine Estate) the land owner has collected numerous Early Stone Age artefacts (including several hand-axes) from fields on a part of his farm. Surprisingly, just one historical artefact was found on the entire survey, but again, large numbers of historical artefacts (mostly ceramic fragments) have been found in the past on one of the farms (Ken Forrester Wine Estate). The historical development of the area goes back to the late 1600s and many well-preserved historical structures dating to the last few centuries are to be found in the study area. Some historical structures of limited significance will be directly impacted by the grade-separated roundabout alternative at the Annandale Road intersection but all other structures will only receive indirect (contextual) impacts. Although the general cultural landscape was also found to be important, specific cultural landscape features (historical roads, leiwater and trees) are less important. The R44, Winery Road and Annandale Road are all scenic routes with tourism significance. The visual study noted a variety of visual receptors, including the historical structures of the area, but because of the landscape setting of the proposed interventions and relatively small zones of visual influence, the visual sensitivity of the Steynrust site is low to moderate, while that of the Winery and Annandale Roads is moderate.

5.47.4 Archaeological impacts are considered likely to be medium for the worst-case scenario (grade-separated roundabouts) but could be reduced to very low significance with mitigation. Test excavations would need to be carried out around the historical structures and plaster sampling would be required to better determine their age, construction sequence and significance.

5.47.5 There are various features on the local landscape that are a result of human intervention. These features turn a natural landscape into a cultural one. Certain specific features and the general landscape character are discussed as follows:

Leiwater canal

5.47.5.1 This canal crosses the R44 just north of the Annandale Road intersection and carries water from upstream.

5.47.5.2 It is traceable on aerial photography for at least two kilometres to the east of the R44 but is uncertain where it runs to the west side.

Trees

5.47.5.3 There are many old trees in the general vicinity of the Annandale Road intersection that contribute to the cultural landscape. A neighbouring land owner who conducted her own archival research, notes that a condition of the original land grant to Jan Wismaar was that any oak trees cut down for domestic uses were to be replaced with young trees.

General landscape

5.47.5.4 The local landscape is one strongly characterised by agricultural activities. Around the Annandale Road intersection strawberries have been grown for many decades and the area is well known for this crop. In recent years the Zetler family have developed the Mooiberge Farm Stall into a well-known tourist stop where people can purchase curios, fresh produce (including strawberries) and other items. Many wineries also occur in this area but are focused further up Annandale Road to the east.

5.47.5.5 At Winery Road, as the name suggest, grapes are the predominant crop. There are fewer wineries here than along Annandale Road, nonetheless, the vicinity is very strongly a wine-related cultural landscape.

Scenic route

5.47.5.6 The R44 can certainly be regarded as a scenic route of some significance. It links two local towns, Stellenbosch and Somerset West, and at the regional level, extends northwards through the Swartland and southwards around the coast to Bot River. The entire road runs along the foot of the Cape Fold Belt Mountains and, except for some of the built-up areas near Somerset West and Strand to the south, the surrounding scenery is most appealing. The many wine farms in the area and the local strawberry industry lend further tourism value to the stretch of the R44 under consideration. Surrounding roads, particularly Winery and Annandale Roads, also have a scenic significance.

5.47.5.7 From a heritage point of view, at-grade roundabouts and signalised intersections are the preferred alternatives at the Annandale and Winery Road intersections. The preferred alternative of grade-separated roundabouts is the least preferred in heritage terms because its sheer bulk will result in impacts of high importance to the cultural landscape and they are thus seen as inappropriate in heritage terms. Impacts to heritage resources at all the other intersections are negligible.

5.48 In August 2015, an Addendum report to the original HIA was conducted by ACO Associates following comments from various interested and affected parties as well as many design changes resultant from the feedback received. The Addendum report stated the following:

5.48.1 Archaeological resources may be directly impacted but none carry high significance and would be referred to as upgradeable resources.

5.48.2 The grading of the cultural landscape/setting includes the historic farmsteads, agricultural fields, wind rows aesthetically pleasing rolling topography and the backing Hottentots Holland Mountains that all contribute to the overall visual experience of the area. Many Grade II Provincial Heritage Sites occur within proximity of the study area in the form of Cape Dutch farm buildings. These buildings and other

components of the landscape mentioned above contribute to its overall perceived value. The road itself is a modern construction and does not carry its own heritage significance. It is the experience of the road user that is of concern and that makes this section of the R44 as a scenic route.

5.48.3 The R44 crosses a portion of countryside that is part of the Cape Winelands Cultural Landscape. This swathe of rolling hills and fields has evolved through the imprinting of a significant human-made layer which in the Cape is one of the oldest human created landscapes characterised by early colonial settlement patterns, the construction of numerous vernacular farmsteads in the 18th and 19th centuries and the cultivation of vines. This has given the area its own unique character and appearance. Since the 1950s this landscape has become increasingly under threat in that the new landscape layer of suburb and township development and the replacement of rural roads with motorways has accumulatively diminished many of the qualities for which the area has been valued. As a result, the winelands landscape that is left is of importance and worthy of protection.

5.48.4 Given the components making up the overall landscape through which this section of the R44 runs, it is suggested that a provisional grading of grade 3 should be assigned to it. The increase in urban densification to both the north (Stellenbosch – James Town) and the south (Helderview) has diminished the quality of this route to the extent that only a 7-km stretch can be winelands landscape, otherwise grade 2 could be argued for.

5.48.5 Many changes to the project proposal have been made after the public consultation process and the impacts thereof are examined below.

5.48.6 At Steynrust bridge, the newly proposed U-turn bridge will not significantly alter the heritage character of this section of the road. It is within an essentially modern residential suburb and no historical features occur in the immediate vicinity. The only impacts would be to the general landscape but because the landscape is essentially modern the impacts are of very low significance.

5.48.7 At Bredell Road, the minor adjustments to the intersection will result in no impacts to heritage resources.

5.48.8 At Winery Road, the new option of a below-ground diamond interchange would result in significantly less impact to the local cultural landscape and sense of place than the above-ground option. This is because there would not be a large, modern concrete structure intruding on the rural landscape. Sight lines across the landscape and to and from the various heritage sites in the area would remain uninterrupted. In terms of views from roads, the main route, the R44, would not be affected since its lanes would remain at present ground level. Only those making use of the below ground interchange or roundabout would lose their views briefly but this is in no way significant since it is a localised impact. If the cuts are given adequate landscaping treatment (at least similar to that proposed for the above ground alternative) then there would be no change in impacts related to this aspect because the area would appear much the same as it does today unless the viewer is very close to the interchange. The impact before mitigation is of local significance, but with mitigation the overall appearance of the development could be slightly improved and the rating after mitigation is very low significance. No significant impacts to physical heritage resources (like archaeology or buildings) are expected, as the disturbance footprint of the new alternative would be largely the same as the original above ground roundabout proposal. Archaeological impact thus remains the same as for the above ground alternative (i.e. very low significance with and without mitigation). This is because the amount of land required for implementation is almost the same as for the above ground option.

5.48.9 At Annandale Road, the new option of a below ground diamond interchange would result in significantly less impacts to the local cultural landscape and sense of place than the above-ground option. This is for the same reasons as stated for Winery Road above. Furthermore, the proposal would result in the removal of the current ground level traffic lights which would serve to reduce the visual clutter in the landscape. In terms of views from the roads, the main route, the R44, would not be affected, since the lanes would remain at ground level. Only those making use of the below ground interchange or roundabout would lose their views briefly but this is in no way significant as it is a localised impact. Again, adequate landscaping of the cuts will ensure that the impacts to the broader landscape are little different to the status quo, although approaching the interchange from the north would allow for greater visibility of the excavated on- and off-ramps and hence a slightly elevated impact intensity when compared to Winery Road. It is expected that landscaping would reduce the impacts from medium to low significance by making the surroundings of the interchange attractive to the eye. Because the disturbance footprint of the new alternative would be largely the same as the original above ground proposal the impacts to archaeology and the built environment are being the same as for the grade-separated roundabout (i.e. medium significance). Recommendations relating to the potential built environment impacts in the north-western and north-eastern quadrants of the intersection remain the same as before, again because the expected land-take is similar.

5.48.10 At Jamestown Burial Park/Cemetery, the newly proposed U-turn bridge would introduce impacts of the cultural landscape because a large concrete structure would be constructed above the roadway and would be prominently visible by road-users travelling either direction. Direct impacts to landscape elements (in this case tree lines) would arise on both sides of the R44 where the road reserve would require widening by 5.5m. To the left (west side of the R44) is a large gum tree line, part of which would need to make way for the new ramps. These large trees contribute meaningfully to the rural nature of the cultural landscape, although at the

same time they also block longer views of the landscape. As a heritage resource they are of moderate significance. The trees along the eastern margin of the road are far smaller and make less of a contribution to the landscape. The main impacts expected are impacts to users of the R44 who would have their views of the surrounding landscape partially obstructed. The impact would be of high significance from relatively close range, but would increase with distance; impacts are thus largely localised. Overall, impacts of medium-high significance are expected. Views from the west and east would also be partially obstructed, largely due to the retaining walls that would be needed to support the ramps, but because of the large number of trees in the landscape these views are likely to only experience impacts of low-medium significance. With the planting of new trees around the bridge the intensity of the impacts, and hence the overall significance, would be reduced. To the east of the R44 lies a cemetery known as the Jamestown Burial Park. Recent aerial imagery available on Google Earth indicates that the number of graves in the cemetery has grown massively in recent years and that the area immediately adjacent to the R44 has been used for graves between July 2012 and June 2013. It is notable that the westernmost line of graves is between 11m and 13m from the present road reserve fence line. Since only 5.5m of land is required, the graves will not be directly affected. It is also noted that graves younger than 60 years and located within a formal municipal cemetery are not protected under the provisions of the NHRA and are therefore not a heritage issue. The graveyard is thus not considered further.

5.48.11 In terms of the road widening at the north end of the study area, various other intersections (Webbers Valley, Techno, Blaauwklippen, Trumali and Van Rheede Roads) have minor works proposed. Of these, only Techno Road intersection was part of the earlier assessment. The very localised scale of the proposed alterations suggests that no significant impacts to heritage resources would occur at any of these intersections.

5.49 After the original HIA and the Addendum report were submitted to HWC for comment, HWC provided an interim comment that noted that the provisions of section 38(3) of the *National Heritage Resources Act, 1999 (Act No. 25 of 1999)* ("NHRA") were not complied with as follows:

5.49.1 The HIA requires a much more substantial assessment of the cultural landscape and a review of the current grading proposals.

5.49.2 Based on the then available information, the gradings proposed for the heritage features were not concurred with.

5.49.3 It was advised that the assessment of the cultural landscape must inform the transport planning proposals rather than being reactive to proposals that have already been formulated.

5.49.4 The impact assessments refer only to the proposed intersection changes in isolation. The proposal to close the median openings along the full length of the R44 has not been assessed at all and requires a detailed assessment. The role of the R44 as a scenic route has not been specifically addressed.

5.49.5 It was suggested that a complete review of the HIA must be undertaken which will require the appointment of a heritage practitioner with substantial experience in cultural landscape assessments and should require design input into the proposals.

5.49.6 A further visual impact assessment must be undertaken.

5.50 Following the receipt of the interim comment from HWC, Mr Chris Snelling, recognised as having the requisite experience in cultural landscape assessments, was appointed to conduct a review of the original HIA and the Addendum report. This review report stated the following:

5.50.1 The interim comment from HWC in respect of urban design input is noted and endorsed. However, at this stage of the EIA process the option of such input is precluded. The EIA process is one which is assessing an application at hand.

5.50.2 It is argued that a further VIA is an unnecessary requirement as there will be mitigations to the proposed works that will be able to address certain of the visual impacts to the affected areas.

5.50.3 The postcolonial historic development of the area is an integral informant in respect to the significance of the rural landscape, and that the road was one part of a network of intersecting paths, tracks and routes, one of which became the R44. Ignoring this underlying network isolates the R44 from the surrounding landscape and from its origins. The labourers, farm workers and people tied to the land still traverse its multitude of networks.

5.50.4 The Eerste River Valley, identified in the 2002 Kruger Roos Report, as comprising of the Eerste River Basin and the Stellenboschberg and Helderberg foothills, bisected by the R44, has been identified as one of numerous cultural landscapes worthy of formal protection for historic, aesthetic, scenic, architectural, symbolic and social reasons. Although the Addendum report to the original HIA provides a tentative grading of IIIC for the wider landscape, it is self-evident that grading the significance of the area is far more complex and indeed the area consists of a collection of formally declared provincial heritage sites, areas which are protected biospheres, sites that are possibly worthy of Grade I and II heritage status, as well as sites of high local significance.

5.50.5 Effectively it is only the stretch between Stellenbosch Square and Bredell Road which is considered as a rural cultural landscape although it is noted that there are still remnants of isolated significance within the rest of the road which will be addressed in the report given it is the stretch that has been identified as a scenic route.

5.50.6 The upgrade of the R44 which began in the 1960s has, as noted, bisected the Eerste River basin into two more or less distinct parts, The Mountain Foothills and the Basin. Of these two regions, held together tenuously through the intersections at Annandale Road and Median Crossings which link previous networks, it is perhaps the foothills which are generally a more intact historic landscape and possesses the greater potential for consideration as being Grade II or I significance.

5.50.7 The R44 has been identified as a Scenic Route and has been included in the Stellenbosch Municipality's Revised Zoning Scheme as an overlay zone. Although the Revised Zoning Scheme is in draft form, it cannot be ignored in considering significance as a Grade III heritage resource. Furthermore, the Scenic Drive is included in the provisions of the PSDF and must be considered by any commenting or consenting authority.

5.50.8 The R44 is noted as being a historic route, with significant gateway conditions both into Stellenbosch itself, as well as into the farmed rural areas of the foothills and basin.

5.50.9 It is noted however, that the scale of the R44 is hardly of a scale that would inform it as being a rural road per se and its integrity has been compromised: the 1960's upgrade into a dual carriageway with related urban road geometric design has turned into a highly trafficked mobility route whose rural quality is often compromised along its route. The urban scaled signalised infrastructure of the Annandale Road crossing, over scaled tourist uses and related intrusive signage all contribute to the detraction of the qualities of the rural landscape, and from a heritage perspective, is something that should be reversed, not accentuated.

5.50.10 The medians are not simply a means for properties located off the R44 to access the road, but have strong historic associated linkage to the memory of the landscape and the value of the R44 as an identified scenic route.

5.50.11 The cultural landscape is a landscape of considerable heritage value in terms of the pattern of historical settlement and cultivation dating to the late 17th century, with scenic route conditions and collection of very significant settlements and significant farmsteads. It is a landscape highly representative of the Cape Winelands.

5.50.12 The significance of the wider area and all heritage resource indicators would argue that the R44 needs to be treated as a part of the landscape, responding to it, rather than an element apart from it. In this regard, it is already noted that the upgrade from the 1960s on has served to separate the landscape on either side of it. The most telling aspect of this being the distinct separation in gradings afforded the landscape to the east and west of the road.

5.50.13 The existing intersections should be treated as appropriate rural nodes, or places of interest along a journey, rather than points of high speed mobility which would negate the rural scale of these intersections entirely.

5.50.14 The nature and scape of the R44 and proposed interventions must reflect the qualities of the rural landscape. This is not merely on a visual scale, with landscaping for example used as an attempt to mitigate the impact, but on a far more fundamental level in that it should be a unifying integral component rather than a separating one.

5.50.15 Although the section of the R44 under discussion falls outside of the jurisdiction of the City of Cape Town, a portion of the R44 which does fall within the City of Cape Town's jurisdiction, lying between the Helderberg Ridge through to Beach Road/Marine Drive has been identified as a scenic drive.

5.50.16 Both the City of Cape Town's Scenic Drive Management and the Stellenbosch Municipality's Draft Revised Scenic Drive Overlay Zone have very similar objectives, refers: *"The overall objective of this overlay zone is to protect the visual environment and scenic value along all the approach routes to Stellenbosch and Franschhoek which provide unique sense of place for its residents and visitors... The rural scenic routes aim to preserve the unique rural visual character and qualities of the area whilst balancing this with the needs of working farms."*

5.50.17 If safety concerns are put aside, (which could be appropriately dealt with should the Scenic Route model be applied), there are no heritage related reasons that would support the indiscriminate closing off of all the medians, particularly those which are not redundant and still have strong linkage with the underlying and tangible rural cultural landscape.

5.50.18 From a heritage perspective, the proposal to close the median crossings, is a result of being informed by a high-speed mobility model, do not respond to heritage resource indicators and recommendations, and cannot at this level be supported.

5.50.19 It is recommended that HWC resolves to recommend to the competent authority as follows.

5.50.20 That a complete review of the nature of the proposed upgrade to the entire route, but the section which falls within the identified scenic drive, be undertaken.

5.50.21 That such review of the upgrade and proposals are undertaken with substantial input from a heritage practitioner, landscape architect and urban designer in the first instance to provide for an integrated and holistic solution.

5.50.22 That in respect to the above Paragraph 5.50.21, the applicant must engage with the competent authority, HWC and the affected local authority and consider relevant policy in respect of scenic drives and the provisions relevant SDFs and the NHRA. Decisions in respect of the future of the R44 should be holistic and taken up at departmental level.

5.50.23 Given the evident significance of the wider area which will be impacted on by the proposed upgrades in their current form, HWC should consider the provisional protection of the R44 Scenic route in terms of the provisions of section 29(1)(a)(ii) of the NHRA.

5.50.24 The importance of the cultural heritage of the Cape Winelands was raised in many comments throughout the Basic Assessment process. In response to interim comments from HWC on the Revised Draft BAR, a heritage practitioner with cultural landscape expertise was commissioned to review and update the HIA. Further visual simulations were also undertaken for viewpoints recommended by this heritage specialist and incorporated into the additional HIA report, which has been appended to the Final BAR. The Final BAR includes relevant content derived from this

specialist report. The additional HIA describes several heritage resources of significant value relevant to the study area context, namely The Eerste River valley rural cultural landscape; a portion of the R44 (south of Jamestown to Bredell Road), which is regarded as a Grade III Scenic Drive Heritage Resources; and certain of the median crossings along the R44. The study argues that the proposed solution is not appropriate from a cultural heritage perspective and should not be considered further.

5.50.25 The HIA was submitted to HWC together with the Final BAR for consideration and decision-making in terms of the NHRA. Their final comments support the recommendations of the HIA.

5.50.26 As stated in the BAR, it must be noted that the R44 was upgraded to a dual carriageway in the 1970s and has served the function of a mobility route in the landscape since that time. It also must be reiterated that the rationale for the proposed project is to resolve the safety concerns regarding the R44, with the closure of the medians proposed as the essential measure to improve the safety of the road. Consequently, safe U-turn opportunities have been proposed at appropriate intervals to ensure that the mobility function of the route is not compromised. The further investigations into the implications of various combinations of U-turn facilities indicated that grade-separated interchanges would be the most appropriate form of U-turn facility in the light of the existing traffic operational conditions along the route.

5.50.27 In respect to comments regarding the visual impact of the proposed project and the alternatives in the Final BAR, a specialist visual assessment study was undertaken and the assessment of visual impacts in the Final BAR is derived from the original study and the addendum study. The visual impact assessment study was undertaken by a recognised professional. In the case of Winery Road, the visual impacts of the above-ground interchange, the visual impacts were assessed to range between "very low" to "low" with mitigation due to Winery Road being located below the R44 for this alternative. In the case of Annandale Road, visual impacts of the above-ground roundabout were assessed to range between "low" to "*medium*" after mitigation with the most significant impacts relating to the loss of a visual resource (the labourer's cottage) and the loss of views due to the presence of the structure near a residence. The visual impacts for the below-ground interchange alternative at Annandale Road were assessed as mostly of low significance, except for the loss of visual resources which were assessed to have the same impact as for the grade-separated roundabout, namely low to medium with mitigation.

5.50.28 The further visual simulations referred to above, undertaken from the viewpoints requested by the heritage specialist, provide an adequate basis for comparing the visual impact of the interchange alternatives within the surrounding environment. The visual simulations of the proposed grade-separated interchange alternatives clearly depict the elevations of both options. Thus, the various views of the proposed interchanges provided in the Final BAR illustrate to a close approximation what the final structures would look like. Various landmarks and specific features (e.g. road signs, buildings, trees) in the images can be used as reference points to obtain an on-site understanding of the proposed alternatives.

5.50.29 The applicant recognises the sensitivity of the environment and will appoint relevant landscape architects to ensure appropriate design and mitigation. This is borne out by various examples where the applicant has included sensitive design philosophies in their road planning. The Pniel Road is quoted as one such example in the additional cultural assessment study. However, sensitive design would depend on the specific context in each case. Thus, the R44, which is a four-lane road with high traffic volumes, cannot be seen in the same context as, for example, the Pniel Road.

5.50.30 The scale of the proposed interchanges was determined during the preliminary design phase and was provided in the project descriptions. This detail was used as a basis for preparing the visual simulations. Thus, the measurements depicted are accurate. The scale would not change because of detailed design. The proposed grade-separated roundabouts would be 7 to 8m above the existing ground level while the proposed below-ground diamond interchange would be 7 to 8m below the ground level.

5.50.31 In respect to lighting, the engineer has confirmed that grade-separated interchanges do not need to be illuminated by standard lighting. Thus, 12m high lighting masts will not be needed. Street lighting would include lighting on the approach ramps to the roundabout as well as lighting within the roundabout itself-the latter of which would be kept to as low as possible whilst complying with the minimum specified standards. Appropriate mitigation measures have also been recommended to mitigate the visual impact, namely "*the use of the lights which direct light downward*" and "*screen the lights at the intersection from the surrounding landscape through tree planting of a rural nature where possible.*"

5.50.32 It is important to note that low-level lighting would suffice for safety reasons for grade-separated interchanges due to the relative free flow of traffic (where traffic does not have to stop), as opposed to the higher level of lighting required for at-grade intersections, high (12m) lighting masts would indeed be necessary for traffic lights and at-grade roundabouts over a substantial distance from both approaches to ensure that approaching traffic lights or roundabouts. The visual impact of lighting associated with at-grade solutions in a rural context would thus be more significant than what would be needed for grade-separated interchanges.

5.51 In terms of the I&APs' submission during the EIA process, that "... *detailed planning of the proposals, including physical modelling of the proposed intersection potential alternatives must be undertaken to provide clear insight into the actual construction proposals and impact*

mitigation measures and which accurately informs both the I&APs and the DEA&DP in their decision-making", the following must be noted.

5.51.1 This approach was suggested by I&APs early in the EIA process. It was subsequently investigated by the design engineer and the results considered by the applicant. This process is recorded in section 3.2.2 of the BAR, with the applicant's rationale for not considering various possible alternatives suggested by the I&APs further described in Table 3.3 of the BAR. The detail in respect to this option is as follows:

5.51.2 To lower the grade-separated roundabout to ground level, would require the vertical re-alignment of the R44 over an approximate distance of 1.4km. Construction would necessarily require the closing of lanes leading to the unavailability of one lane in each direction for the duration of the construction period. Watercourses crossing the R44 near the Annandale Road Intersection would also need to be realigned or diverted for a considerable distance. Significant infrastructure would also be required to ensure adequate drainage from the R44 to a lower point downstream. The anticipated cost for this alternative would be significantly greater than proposed. Due to the extensive works that would need to be undertaken and the costs involved this alternative was not considered feasible.

5.51.3 Thus, the option was not dismissed without due consideration as claimed by the I&APs. The alternative of keeping the R44 at the current level and placing Winery and Annandale Roads below the R44 in the form of diamond interchange was introduced only when it became clear that at-grade alternatives would not be feasible. This was concluded after further detailed investigation of various combinations of at-grade intersections by the operational traffic analysis. Thus, an alternative grade-separated option to the proposed grade-separated roundabouts had to be considered. The excavations for lowering the R44 i.e. a dual carriageway for 700m in each direction from the interchange, would be more extensive than that for the proposed below-ground diamond interchange as both Winery and Annandale Roads comprise a single carriageway. Furthermore, reconstructing the existing pavement layers of the four-lane dual carriageway over 1.4 km would add considerable additional cost.

5.51.4 Detailed design work is not undertaken before a project has been approved. Detailed design is time consuming, costly and it is thus not cost-effective to expend resources on project components or alternatives before they have been approved for implementation. As already indicated above, detailed design is not going to change the scale of the proposed interchanges on which visual simulations were based as the scale was already determined during the preliminary design phase. As stated above, the visual simulations from various viewpoints provide an adequate basis for comparing the visual impact of the interchange alternatives within the surrounding environment, which is required at this conceptual stage of the proposed project. Various landmarks in the figures provided in the reports can be used as reference points to obtain an on-site understanding of the proposed alternatives.

5.52 The additional HIA further limited its assessment to the cultural landscape considered sensitive, i.e. south of Jamestown to Klein Helderberg Road. The heritage-related mitigation measures included in the Final BAR relate to the heritage components excluded from the additional HIA. The additional HIA did not recommend any mitigation measure for inclusion in the Final BAR as it stated that it would be possible to mitigate the potential impacts it had identified.

5.52.1 In terms of the alleged detrimental visual impact of the proposed interchanges and road widenings: In respect to the comments regarding the vertical retaining walls, the design engineer has confirmed that the proposed interchanges do not necessarily require vertical retaining walls. They can be constructed with landscaped earth embankments.

5.52.2 In respect to the comments regarding Street lighting, the design engineer provides the following response:

5.52.2.1 *"There is already street lighting at the Annandale intersection so the only additional street lighting that would be required would be at the Winery Road Intersection- whether or not the upgrade be signal controlled, a roundabout or an interchange."*

5.52.2.2 *"Low height poles would be used for the greatest extent possible to minimise any potential visual impact."*

5.52.3 It should further be noted that a grade-separated solution would require less lighting at a circle or traffic lights as the R44 traffic would need to stop, as is the case for at-grade solutions.

5.53 In response to the review of the HIA and HWC's comments, the applicant responded *inter alia* that:

5.53.1 The comments and recommendations of HWC are noted, and specifically the notion that the comment confines itself to heritage considerations. Thus, HWC's comments endorses the heritage specialist study, which concluded that the proposed project in its current form and all alternatives that have been considered should not be developed.

5.53.2 However, as stated in the Revised Final BAR conclusions, this should be considered within the context of the R44 as a dual carriageway which has been existing since the 1970s. When the four-lane dual carriageway replaced the then existing single lane road, this could be regarded as when the major change to the cultural landscape occurred. The safety and level of service improvements that are now being proposed would largely take place within the confines of the existing road reserve (except at the two interchanges) and should be considered in this context. The proposed project scheme is based on the premise that the safety issue can only be addressed by closing the median openings as the applicant has proposed. Thus, although recognising the cultural heritage value of these openings, their closure is

the key component of the project rationale. Should the median openings not be closed, the safety concerns associated with vehicles using the openings would continue- with the safety risk expected to increase in the future in line with anticipated traffic growth.

5.53.3 Some of HWC's final comments are contradictory. It is considered disingenuous to totally divorce the high traffic volumes (>30 000 vehicles per day) with protection of heritage resources along the route. The four-lane road is a fact of life and will remain as such.

5.53.4 There appears to be no definition of a scenic drive and HWC comments are subjective.

5.53.5 In terms of HWC's final comments:

5.53.5.1 HWC appears to have totally missed the point of what it terms social and economic benefits.

5.53.5.2 The basis of the project is to improve safety along the R44 route. The social and economic benefits of making a road safer (less fatalities and serious injury) are well documented and cannot be disputed.

5.53.5.3 The economic study undertaken as part of the basic assessment process shows that the proposed upgrades have a positive economic status i.e. money will be well spent.

5.53.5.4 An unsafe road is not a boon to tourism but could be a negative aspect to tourism.

5.53.6 HWC comments on the VIA are considered subjective and the disagreement with the ratings given in the report has not been motivated.

5.53.7 HWC's comments on the proposed closure of median openings are concerning. They appear to be placing their perception of a scenic route (a four-lane divided road with a 50-m road reserve and carrying more than 30 000 vehicles per day) above the safety of road users.

5.53.8 The comments of HWC about the status of the R44 are considered incomprehensible. The R44 road is not a high-speed route. It is, however, a mobility route (this is borne out by the fact that more than 30 0000 vehicles use the road every day). The route is already existing.

5.53.9 The comments of HWC made about engineering a road design appear to also have missed the point. The safe accommodation of motor vehicles is by its very nature an engineering process. On any road related project, it is incumbent on the authorities to mitigate any negative aspects related to the final product. With respect to the project at hand, the authority has:

5.53.9.1 Undertaken a detailed assessment of alternatives to the preferred proposal.

5.53.9.2 Considered visual impacts, including mitigation measures.

5.53.9.3 Minimised land take.

5.53.9.4 Ensured that the proposal safeguards the safety of road users in the best possible way.

5.53.10 HWC recommends that a complete review of the proposed upgrade be undertaken. It has, however, not given any concrete objections to the proposed project and has given what is regarded as a subjective opinion. It has nonetheless apparently indicated that the safety of road users is not considered important.

5.53.11 If HWC is objecting to the proposed alternative then they must propose a better alternative on the table. HWC have been unable to do so.

5.53.12 HWC has threatened to invoke section 29(1)(a)(ii) of the NHRA. This "*threat*" must be read in conjunction with section 49 of the NHRA which states that anybody has a right of appeal against any decision by HWC.

5.54 The EMPr approved in the conditions of the EA for the mitigation of impacts requires *inter alia* the following measures to be implemented and complied with during the construction phase of the activities:

Protection of natural features, flora and fauna

5.54.1 The contractor shall comply with the recommendations as set out in the specialist studies undertaken for this project.

5.54.2 Protection of natural features.

5.54.3 The area of disturbance should be limited to a small an area that will be used for the works.

Protection of heritage and cultural features

5.54.4 Demarcate sensitive heritage sites close to the project area so that they are not affected during construction. Sites to be demarcated include the two houses in the north-western quadrant of the Annandale Road intersection.

5.54.5 The Environmental Control Officer ("ECO") (which will be appointed as required by the conditions of the EA) is to be kept informed of all developments in the event where modifications are made to the clearing or earth works schedule.

5.54.6 If an archaeological site/ archaeological finds are discovered during any construction activity, the work is to be halted and the ECO must be notified immediately who will in turn contact HWC.

Lights

5.54.7 The contractor shall avoid construction activities outside normal working hours. This should be determined together with the local authorities.

5.54.8 The contractor shall ensure that any lighting installed on the site for his/her activities do not interfere with road traffic or cause a reasonably unavoidable disturbance to the surrounding users.

Aesthetics

5.54.9 The contractor shall take reasonable measures (e.g. visual screening using shade cloth in combination with fencing to screen the construction site, equipment and

materials) to ensure that construction activities do not have an unreasonable impact on the aesthetics of the area.

5.54.10 All disturbed areas shall be re-vegetated, using local fynbos species, to minimise any visual scarring and reduce the aesthetic impact of the improvements.

5.54.11 The planting of trees is encouraged as it aids in dissipating sound and will enhance the aesthetics of the area. However, tree planting would need to take cognisance of safety requirements such as sight lines and sight distances.

Access, traffic and safety

5.54.12 Only access routes/ position approved by the ECO shall be used.

5.54.13 The contractor shall ensure that access through the site is maintained at all times for other road users and is in a suitable condition.

5.54.14 The contractor shall ensure that continued access is maintained at all times to the farms, businesses and residential properties.

5.54.15 The contractor shall ensure that adequate traffic accommodation, signage and safety measures are put in place on site.

5.54.16 The applicant must ensure that signage remains clear throughout the construction period and replace or relocate the signage as appropriate at the end of the construction period to ensure minimal impact on tourism facilities.

Rehabilitation plan

5.54.17 A rehabilitation plan should be developed by an appropriately qualified individual such as a landscape architect and/or botanist. The rehabilitation plan shall include details of the following:

5.54.17.1 Seed collection (in areas to be disturbed), harvesting methods and locations and seed storage methods.

5.54.17.2 Search and rescue.

5.54.17.3 Handling of plant material rescued (translocation areas, propagation, etc.).

5.54.17.4 Establishment and maintenance of a project-specific nursery, if required.

5.54.17.5 Seed mix of suitable indigenous plants for areas under consideration (Swartland Granite Renosterveld and riparian habitat).

5.54.17.6 Procurement requirements and a list of species of plants to be procured, if any.

5.54.17.7 Vegetation establishment and maintenance requirements for all revegetated areas:

- ✓ Re-vegetation must include the use of only indigenous vegetation.
- ✓ Rehabilitate using endemic shrubs.
- ✓ Ensure the re-establishment of *Psoralea pinnata* along the stream at the Annandale Road intersection.
- ✓ Re-establish the hedge which would be removed at the Winery Road intersection during the clearing with a planted berm of endemic shrub species.
- ✓ Translocate the wild olive trees for use during rehabilitation.

5.55 Considering the above, the alternative/s described under the description of the activity are authorised in an appeal decision with the variation of the EA stating that a below-ground grade-separated diamond interchange is approved for Annandale Road.

The Revised Final BAR is defective in that it failed to adequately consider visual impacts

5.56 The EIA Report considered the visual impacts as follows:

5.56.1 The study area is a predominantly rural area which is sought after as a way of life by many, as is evident by the numerous housing developments close to Stellenbosch, while it attracts numerous tourists because of its scenery, cultural heritage, wine farms and tourist destinations.

5.56.2 Farmsteads and agricultural buildings are scattered across the rural landscapes, with numerous conversions to tourist oriented businesses such as farmstalls, restaurants and tourist accommodation. Small, historic village settlements, such as Raithby and Jamestown, are found amongst the rural landscape as are commercial facilities such as nurseries. Larger settlements include the towns of Somerset West and Strand in the south and Stellenbosch in the north. Golf estates and industrial parks are inclusive in the built landscape.

Steynrust Road interchange

5.56.3 Situated in the north-western suburbs of Somerset West, the intersection lies within an area that is transitional from a suburban to rural landscape. Residential development is within 100m of the intersection in the south. The suburbs of Helderberg are located to the east and the west.

5.56.4 The R44 crosses a ridge at the foot of the Helderberg Mountain, under the Steynrust Road bridge and continues northwards through a narrow valley, a tributary of the Eerste River. Large exotic trees and low grass provide an open parkland adjacent to the intersection through which the road traverses.

5.56.5 Potential receptors at this interchange are residential area which are considered high sensitivity receptors. The proposed improvements would be seen by immediate residents. However, the large pine trees, public open space and the high walls and hedges surrounding the most adjacent properties would provide screening.

5.56.6 Due to the existing roads, built environment, residential development and large trees which result in the study area being minimally visible in the landscape, the visual sensitivity of the landscape to the proposed interchange improvement is low.

Winery Road intersection

5.56.7 The Winery Road intersection is situated in the rolling, rural landscape on the slopes of the lower foothills of the Helderberg Mountain.

5.56.8 Large exotic trees are prominent as windrows, avenues and farmstead shade trees. Vineyards, horse paddocks, large trees and retail nurseries form the rural patchwork, stitched by trees and hedges, which surround the intersection. Travelling south outlying residential areas of Somerset West are visible edging the rural landscape. Historic homesteads look across the R44, with views of the neighbouring rural scene and Helderberg and Stellenbosch Mountains with western views of the Peninsula Mountains. These farms adjacent to the R44 / Winery Road intersection offer wine tasting, restaurant and guest cottage accommodation.

5.56.9 The scenic resources of the Winery Road intersection area can be described as rural, with vineyards, pastures, paddocks, windbreaks, shaded homesteads and tree lined streams on the gently rolling hills backed by the massive mountains providing a scenic and visual resource that is highly sought after. Receptors within the immediate vicinity of this interchange include:

5.56.9.1 Avontuur Estate to the east and Ken Forrester Wine Estate to the south-west, both historic farm settlements, current homesteads and tourist destinations with wine tasting, restaurant (Avontuur) and accommodation (Ken Forrester Wine Estate). These receptors are multi-purpose high sensitivity receptors.

5.56.9.2 Smallholdings to the north-west which are predominantly commercial nurseries but have some residential usage, are moderate to high sensitivity receptors.

5.56.9.3 Both the R44 and Winery Road are tourist / wine routes. Users thereof are thus high sensitivity receptors.

5.56.9.4 The R44 road is also used by approximately 30 000 commuters on a daily basis who are thus moderate sensitivity receptors.

Annandale Road intersection

5.56.10 The R44 / Annandale Road intersection is also set on the Helderberg foothill slopes surrounded by a busy rural node of tourist facilities, including wine tasting facilities, the Mooiberg Farmstall, the Audacia tented farm market facility, fields of strawberries, homesteads and farm sheds and guest cottage accommodation. Due to its moderately visible position in the landscape, the intersection has a moderate visual sensitivity.

5.56.11 Large trees line the watercourse and provide shade for homesteads, with a plantation of Stone Pine trees covering the slopes of the hills to the north, providing shade for a caravan park. Strawberry fields dominate the immediate surrounds of the intersection with these being seasonally covered by rows of white plastic, stark sight and source of glare at certain hours of the day. Large scarecrow like caricatures are scattered through a strawberry field and along the fence leading to the Mooiberge Farmstall, which while colourful and reminiscent of Playground Fairs could be construed as visual clutter.

5.56.12 The following receptors in the immediate vicinity of the proposed Annandale intersection are rated as high sensitivity receptors:

5.56.12.1 Two residential buildings to the north-west on Farm No. 539, Brakelsdal.

5.56.12.2 Historic workers' cottages north-east of the interchange on Farm No. 538.

5.56.12.3 Akkersdraai residential homestead and guest lodge on Farm No. 537/18.

5.56.12.4 Mooiberge Farmstall with wine tasting and restaurant on Farm 537/18 to the southeast of the interchange with a small residential cottage to the east.

5.56.12.5 Audacia tented Root 44 market to the north east, which hosts weekend markets.

5.56.12.6 Users of the R44 and Annandale Roads which are scenic, wine and tourist nodes.

5.56.13 Workers tending the strawberry fields are rated moderate sensitivity receptors.

5.56.14 The scenic resources of the Annandale Road intersection area can be described as rural and tourist providing a scene that it highly sought after. However, the R44, a major road with associated traffic lights and high mast lighting, detracts from the rural quality. The overall scenic and visual resources are thus defined as moderate to high.

Jamestown cemetery

5.56.15 This location is on the southern slopes of the Blaauwklip River valley, where the area is characterised by both farmlands and development. Farmlands are visible in the immediate vicinity with views of the Helderberg, Stellenbosch, Jonkershoek and Simonsberg mountains beyond. Nearby surrounding development includes farmsteads, residential areas, tourist/retail facilities and an office park (Stellenbosch Square).

5.56.16 High sensitivity visual receptors would potentially include:

5.56.16.1 Jamestown cemetery immediately to the east.

5.56.16.2 Residents immediately to the west, south-west and north-west including Uitsig and Drie Lande farmsteads, De Zalze Golf Estate (although these residents are predominantly screened by landscaped berms and are orientated to look away from the proposed bridge), Klein Zalze Estate and Stellenbosch Golf Club to the north. Some areas of Jamestown to the north east and Blaauklip farmsteads/settlements beyond are predominantly screened by the Stellenbosch Square development and tree planting.

Steynrust Road

5.56.17 The development of the U-turn facility may change the visual landscape of the surrounding area. The development of this proposed project would result in the loss of some visual resources thereby affecting sensitive receptors.

5.56.18 Construction and operation phase activities would result in the removal of some trees and grass, and an increased road surface area associated with the U-turn deck and

associate ramps. The impact of the additional visual impacts is thus considered to have a medium intensity, be of local extent and long-term duration. The resulting impact would have a medium significance which with mitigation could be reduced to low significance.

5.56.19 Receptors (residents, users of the Steynrust bridge system and R44 and of public open space areas) would see the U-turn deck, associated ramps and vehicles. The removal of trees would increase exposure of the existing and new road and bridges to the receptors, whereas the existing road and bridges are currently partially screened. However, as the proposed U-turn deck would be located up against the existing Steynrust Road bridge this impact would be local, limited to the Zone of Visual Influence and is deemed to be of low intensity resulting in a low significance impact with and without mitigation.

5.56.20 The following mitigation measures which have been recommended are to be included in the EMPr approved in the conditions of the EA:

5.56.20.1 Limit the extent of the disturbance.

5.56.20.2 Rehabilitate and revegetate the disturbed areas with appropriate vegetation after construction.

5.56.20.3 Appoint a landscape architect to develop the landscape philosophy, provide detailed drawings and specification for the tender documentation and to monitor implementation.

5.56.20.4 Consult with the City of Cape Town's Spatial Planning and Urban Design Department to obtain input into the proposed landscape plans prior to construction.

Bredell Road/ Klein Helderberg Road

5.56.21 The visual impacts could result from the proposed project include a change in the rural landscape character resulting from the visual intrusion of the physical structures, associated lighting infrastructure and light pollution.

5.56.22 The proposed grade-separated roundabout deck level would be approximately 7 – 8m above the existing carriageway level with associated fill slopes or retaining walls extending beyond the current road reserve. This alternative would result in the loss of some visual resources thereby affecting sensitive receptors such as Avontuur, the Ken Forrester Wine Estate and the Happy Vale homestead. It would also be illuminated at night in some light pollution.

5.56.23 A change in land use character from rural to urban would to some extent be experienced. All visual impacts are anticipated to occur locally within the Zone of Visual Influence and have a long term or permanent duration.

5.56.24 The existing road connectivity at the intersection respects the rural character of the area. The proposed grade-separated roundabout would be of a more highway nature resulting in the interchange being less rural in nature. The impact on the rural landscape character is thus considered to have a high intensity, local extent and would be permanent. The resulting impact would have a high significance which with mitigation could be reduced to a medium significance.

5.56.25 The proposed grade-separated interchange would require street lighting which could result in light pollution to receptors within the Zone of Influence leading to some loss of night darkness, appreciated in a rural landscape. The intensity of this impact is medium to high with local extent and long-term duration. This would result in a medium to high impact significance which with mitigation could be reduced to medium significance.

5.56.26 Receptors (surrounding farmers, smallholdings, etc.) would see the elevated roundabout, vehicles on the ramps, night lighting and new access roads within their largely unobstructed view field. The interchange would not block views of the surrounding rural landscape and mountains, but would partially intrude on these views. This is deemed to be an impact of high intensity resulting in a high significance impact which with mitigation could be reduced to medium significance.

5.56.27 The proposed roundabout would be visible for a radius of approximately 2.5 km within the Zone of Influence. Views of the adjacent landscape, particularly to the southwest, may be partially obscured. This impact is deemed to have medium intensity resulting in an impact of medium significance and with mitigation of low to medium.

5.56.28 The impacts, however, would be restricted very locally to users of the R44 and the users of the interchange itself and be only partially visible to sensitive visual receptors (adjacent landowners of Avontuur, Ken Forrester Vineyards and happy Vale) as the existing R44 road and traffic is currently partially obscured to them. All visual impacts are anticipated to occur locally and have a long-term duration. From a visual sensitivity perspective, this alternative is preferred to the grade-separated roundabout.

5.56.29 The below ground interchange would result in a change in the character from rural to urban. The impact is considered to have a low intensity at the local level, with a significance rating of low with and without mitigation.

5.56.30 The intensity of this impact is low, of local extent, limited to the Zone of Influence and long-term duration. This would result in a low impact significance which could be reduced to very low significance with mitigation.

5.56.31 The proposed interchange would be visible to users of the interchange and the R44 and partially visible to the adjacent landowners (Avontuuur, Ken Forrester Vineyards and Happy Vale). This impact would be of low intensity resulting in a low significance impact with or without mitigation.

5.56.32 As the views of the proposed interchange would be restricted to its immediate surroundings, this impact is deemed to have a low to medium intensity resulting in an impact of low to medium significance and with mitigation of low significance.

5.56.33 The following mitigation measure which have been recommended are to be included in the EMPr approved in the conditions of the EA:

5.56.33.1 Use low spill light which directs light downward.

5.56.33.2 Cover associated infrastructure such as electrical kiosks with rural type coverings or where feasible, bury them.

5.56.33.3 Plant vegetation on the fill slopes / embankments or in front of the vertical retaining walls to screen the interchange from sensitive receptors.

5.56.33.4 Landscape cut embankments and disturbed areas in appropriate ways to blend in with the rural nature.

5.56.33.5 For the below-ground interchange: Use exposed aggregate finish to provide a more natural aesthetic.

5.56.33.6 Screen the lights at the intersection from the surrounding landscape through tree planting of a rural nature where possible.

Annandale Road:

5.56.34 Visual impacts that could result from the proposed project include a change in the semi-natural landscape character resulting from the visual intrusion of the physical structures, associated lighting infrastructure, light pollution and loss of visual resources.

5.56.35 The proposed grade-separated roundabout deck level would be approximately 7 – 8 m above the existing carriageway level with associated fill or slopes or retaining wall extending beyond the current road reserve. This would result in the loss of some visual resources thereby affecting receptors such as the Mooiberge Farmstall, the Audacia Tented Root 44 Market, the Klein Akkerdraai Guest Lodge and residents in the immediate surrounding area. It must, however, be noted that the area has already lost some of its rural character because of the presence of facilities associated with the strawberry industry, the existing signalised intersection and the R44 roadway. All visual impacts are anticipated to occur locally within the Zone of Influence and have a long term or permanent duration.

5.56.36 The current intersection is signalised and is located adjacent to rural tourist / commercial components (Mooiberge Farmstall and Root 44 Market) and rural industrial components (strawberry packing sheds and plastic tunnels). The proposed grade-separated roundabout has the potential to further change the already partially transformed semi-natural character of the area immediately surrounding the intersection as it would be of a more highway nature. The impact on the semi-natural landscape character is thus considered to have a medium to high intensity of local extent and long-term duration. The resulting impact is deemed to have a medium significance which with mitigation could be reduced to a low to medium significance.

5.56.37 The proposed grade-separated interchange would require the same or less lighting than the status quo. It is thus anticipated that there would be no change or minor improvement to the existing situation.

5.56.38 Th historic cottage, building remnant on Farm 538 and the associated oak trees would be lost. The anticipated intensity of this impact would be medium, of local extent and permanent duration. It is deemed that this impact would be of medium significance with and without mitigation.

5.56.39 The proposed elevated roundabout would result in the loss of trees, a portion of the garden, an entrance gate and views from the immediately adjacent houses as they would be situated less than 50m from a 5m fill embankment or retaining wall of the proposed roundabout. This impact is thus deemed to have a medium intensity with local extent and long-term duration. This would result in an impact of medium significance both before and after mitigation.

5.56.40 There are many sensitive receptors in the Zone of Influence of this proposed grade-separated roundabout interchange, all within 150m of the proposed roundabout. These receptors would all experience a change in their visual environment because of the proposed grade-separated interchange, ramps and access roads being visible from their properties, in some instances on their properties, bringing traffic closer to them than before. The impact is thus considered to have a medium intensity of local extent and be long term. The resultant impact significance is deemed to be medium which with mitigation could be reduced to low to medium.

5.56.41 The proposed roundabout would be visible for a radius of approximately 2km within the Zone of Influence. Views of the adjacent rural landscape, including views of the Mooiberge Farmstall and adjacent strawberry fields would be partially obscured. This impact is deemed to have low to medium intensity, local extent and long-term duration. It is thus anticipated that this impact would have a significance of low to medium which with mitigation could be reduced to low.

5.56.42 The proposed interchange would be approximately 7 – 8m below the existing carriageway level. Lighting would be limited to the retaining walls of the on-and off-ramps. Much of the high-level lighting would be removed. The loss of scenic resources in the form of the historic cottage on Farm 538 (north-east of the intersection) and the entrance to the farmstead (north-west of the intersection) would be common to both alternatives. However, the visual impact of the interchange structures would be restricted very locally to users of the R44 and sensitive visual receptors. All visual impacts are anticipated to occur locally and have a long-term duration. From a visual sensitivity perspective, this is the preferred alternative recommended in the EIA process due to the following:

5.56.42.1 The below-ground interchange would result in a change in the character due to the implementation of a configuration common to many South African freeways, but unusual to the cultural semi-rural landscape. It

would thus intrude visually to some extent. The impact is considered to have a low intensity at the local level, with a significance rating of low with and without mitigation.

5.56.42.2 No light pollution is expected to result from the development of the proposed below-ground interchange as less lighting than the existing situation would be required and it would largely be located below ground.

5.56.42.3 The cut slopes of the north-eastern ramp would result in the loss of the cottage and building remnant of Farm No. 538, Brakkelsdal. This would, in turn, result in the loss of a visual and scenic resource. Similarly, the entrance to the farmstead on the north-west quadrant and much of the garden would be lost. However, the remaining resources, e.g. strawberry fields and Mooiberge Farmstall, would not be diminished by this proposal thus the overall semi-rural visual resource would remain. The intensity of this impact is low to medium, of local extent and permanent. This would result in an impact of low to medium significance with and without mitigation.

5.56.42.4 The development of this alternative would not be associated with loss of views due to its location below ground.

5.56.42.5 Some aspects of the interchange would visually intrude and the sense of place would change. This impact is anticipated due to the proximity of the structure to local receptors, e.g. residents from adjacent smallholdings and farms, as well as the loss of some ground and trees. The impact would be of low intensity, local extent and long-term duration. The significance of the impact would thus be low with and without mitigation.

5.56.42.6 Views of the interchange would be restricted to the immediate surroundings while views of the adjacent semi-rural landscape, including views of the Mooiberge Farmstall and adjacent strawberry fields, would not be affected. The impact is of low to medium intensity, local extent and long-term duration; thus, the impact significance would be low to medium before mitigation, which could be reduced to low with mitigation.

5.56.43 The following mitigation measures which have been recommended are to be included in the EMPr approved in the conditions of the EA:

5.56.43.1 Use of low light which directs light downward.

5.56.43.2 Landscape and revegetate cut embankments and disturbed areas such that they blend in with the rural nature of the surrounds.

5.56.43.3 Screen the light spill and the structures from the surrounding landscape through tree planting of a rural nature, where possible.

5.56.43.4 Reduce the extent of the cut/fill slopes using the retaining walls, especially in the north-western quadrant.

5.56.43.5 Provide a planted berm adjacent to the new access road on the Klein Akkerdraai property to serve as a visual and noise screen.

5.56.43.6 For the below-ground interchange, use exposed aggregate finish to provide a more natural aesthetic.

Jamestown U-turn facility:

5.56.44 The development of the proposed U-turn facility at the Stellenbosch end of the upgrade road section may change the visual landscape of the surrounding area.

5.56.45 The proposed U-turn bridge would result in a change in the character from semi-urban to urban as a grade-separated bridge is a feature common to freeways. The impact on visual aspects is thus considered to have a medium -high intensity, local extent and long-term duration. The resulting impact would have a medium to high significance before mitigation which could be reduced to medium significance after mitigation.

5.56.46 Users of the R44 and local visual receptors (adjacent residents, golfers, Jamestown cemetery and Stellenbosch Square, etc.) would see the U-turn deck, associated ramps and vehicles. The removal of some of the mature trees to the west of the proposed structure would increase exposure of the existing road and new bridge structure to the receptors. Adjacent residents, especially Uitsig Farm, would also see the ramp retaining wall, which could be up to 10m high on the western side. This impact would be local, limited to the Zone of Visual Influence, of long-term duration and is deemed to be of low intensity resulting in a medium significance impact before mitigation, which could be reduced to low significance after mitigation.

5.56.47 The at-grade alternative would have a larger physical footprint than the U-turn bridge structure, which would result in the loss of more trees to both sides of the road, However, as the visual impact (which includes both rural landscape and visibility from receptors) would be largely limited to the teardrop structure at ground level road, it is deemed to have a low to medium intensity, local extent and long-term duration. Thus, the significance of the impact is low to medium before mitigation, which could be improved to low with the implementation of the recommended mitigation measures.

5.56.48 At Webersvallei Road intersection, no visual impacts would result from this alternative as the proposed improvements would be limited in extent and located within the existing road reserve. The nature of the existing intersection would not change.

5.56.49 The following mitigation which were recommended are to be included in the EMPr approved in the conditions of the EA:

5.56.49.1 Landscape fill embankments, walls and disturbed areas in appropriate ways to blend it with the semi-rural nature of the landscape.

5.56.49.2 For the grade-separated U-turn bridge:

- ✓ Use exposed aggregate finish on ramp retaining walls to provide a more natural aesthetic.
- ✓ Appoint an arborist to manage root and crown pruning of trees.
- ✓ Replant lost trees and plant new trees to screen the elevated structure from the surrounding landscape.

5.57 The abovementioned rubric of the assessment of visual impacts was informed by the specialist study and the Addendum report which were conducted by Megan Anderson Landscape Architects in March 2014 and November 2015 respectively. The Addendum visual impact report stated that:

Steynrust road intersection: U-turn bridge deck and turning lanes

5.57.1 Receptors, residential areas, scenic routes and recreational areas (moderate to high sensitivity receptors), would see the U-turn deck, associated ramps and vehicles. The removal of the trees will increase exposure of the existing and new road and bridges to the receptors, whereas the existing road and bridge are currently partially screened.

5.57.2 The original proposal for the Steynrust Road interchange was a roundabout at the intersection of Beaulles Crescent and Zandberg Road. A second alternative is proposed namely a U-turn bridge deck and turning lanes. The impact on grass and trees of the U-turn deck and turning lanes would be greater than that of the Beaulles Crescent Roundabout and it would be more visible to receptors, but would not result in significant visual change as it would be more situated up against the existing Steynrust Bridge for which there would not be additional lighting. For this alternative, the significance of the visual impact after mitigation is low.

Winery Road intersection: Submerged diamond interchange

5.57.3 Originally three alternatives were proposed for this interchange: a signalised intersection, an at-grade roundabout and a grade-separated roundabout. A fourth alternative, a submerged diamond interchange, is now proposed for this interchange.

5.57.4 Lighting would be limited to the retaining wall on the on- and off- ramps i.e. this lighting is not above ground.

5.57.5 Although the submerged diamond interchange is a feature common to many of the freeways it would intrude visually and change the rural character as it is not common to the cultural rural landscape which is being continually eroded. However, the impacts would be restricted locally to users of the R44 and the users of the interchange itself and be only partially visible to sensitive visual receptors (adjacent landowners of Avontuur, Ken Forrester Vineyards and Happy Vale) as the existing R44 road and traffic is currently partially obscured to them. For this alternative, the significance of the visual impact after mitigation is low to very low. From a visual sensitivity perspective, this alternative is preferred to the elevated roundabout.

Annandale Road: Submerged diamond interchange

5.57.6 Like the Winery Road interchange, originally three alternatives were proposed for the Annandale Road interchange: a signalised intersection, an at-grade roundabout and a grade-separated roundabout. A fourth alternative, a submerged diamond interchange, is proposed for this interchange.

5.57.7 Lighting would be limited to the retaining walls of the on- and off- ramps i.e. this lighting is not above ground. The existing high mats lighting on the interchange would be removed.

5.57.8 As with the submerged diamond interchange proposed for Winery Road, the submerged diamond interchange proposed for Annandale Road would result in some change in character and visual intrusion, with low impact levels after mitigation. In addition, there would be a loss of scenic resources, in the form of the loss of the historic cottages on Farm No 538 north east of Annandale interchange and entrance to Farmstead on the north-west side. However, at this interchange, the loss of these cottages and entrance gate would be common to both this alternative (submerged diamond interchange) as well as the grade-separated roundabout. Impacts are however restricted very locally with this submerged diamond interchange proposal, with impacts after mitigation ranging from low to low-medium, and is preferred ahead of the grade-separated roundabout from a visual perspective.

Jamestown cemetery: Grade-separated U-turn bridge

5.57.9 The proposed intervention is on the southern slopes of the Blaauklip River valley, where the area is characterised by both farmlands and development. Farmlands are visible in the immediate vicinity of the proposed U-turn bridge, with views of the Helderberg, Stellenbosch, Jonkershoek and Simonsberg mountains beyond. Nearby surrounding development includes farmsteads, residential areas, tourist/retail facilities and an office park (Stellenbosch Square).

5.57.10 As the current U-turn opportunity is an at-grade median opening, the change to a grade-separated U-turn bridge would result in medium to medium-high impact significance with respect to the impacts: change of the semi-rural character and views of the proposed structure. After mitigation, primarily through tree planting, the significance of these impacts would be reduced to medium and low-medium.

Bredell Road, Webers valley, Techno, Blaauklippen Road, Trumali Street, Van Rheede Road: Minor localised widening with the road reserve

5.57.11 The potential impact of these proposed intersection upgrades has been considered but are minor and have not been assessed as they would result in very little to no visual impact.

The Revised Final BAR is defective in that it failed to adequately assess all alternatives

5.58 Regulation 3(1) of Appendix 1 of the 2014 EIA Regulations (as amended) states that *"[a] basic assessment report ["BAR"] must contain the information that is necessary for the competent authority to consider and come to a decision on the application, and must include...*

(v) the impacts and risks identified for each alternative, including the nature, significance, consequence, extent, duration and probability of the impacts,

including the degree to which these impacts—

(aa) can be reversed;

(bb) may cause irreplaceable loss of resources; and

(cc) can be avoided, managed or mitigated...

(vii) positive and negative impacts that the proposed activity and alternatives will have on the environment and on the community that may be affected focusing on the geographical, physical, biological, social, economic, heritage and cultural aspects;"

5.59 To meet the requirements of the applicable legislation, a BAR which contained an investigation of the potential consequences or impacts of the alternatives to the activity on the environment was submitted, stating *inter alia* the alternatives that were considered as detailed in the reasons for the EA.

5.60 The following are the options that were considered early in the conceptual design phase:

The introduction of a diamond interchange at Annandale and Winery Roads intersections:

5.60.1 When considering grade separating the aim is to provide free-flow for the U-turn. The diamond interchange is less than the roundabout interchange in terms of the type of movements anticipated and the number of stops associated with the U-turn. This option was thus not further considered as an above-ground alternative.

The construction of secondary roads along the route (including options for connecting these roads to the R44):

5.60.2 Specific reasons for not considering secondary roads (either frontage or backage) includes the following:

5.60.2.1 It is estimated that frontage roads would result in an additional 13 or 26 km road on one or both sides of the R44. This would require approximately 39 ha of land to be obtained from existing properties for a 30m road reserve.

5.60.2.2 Backage roads would require more than 39 ha of new road network to link properties which have had direct access to the R44 closed, back to a limited number of new intersections/ interchanges due to the additional distance required for many properties to connect to a new secondary road network.

5.60.2.3 Closure of R44 access points would remove the existing direct access for visitors from the R44 and require a more indirect route to such properties.

5.60.2.4 The current traffic volumes are such that freeway standards are not yet required. Thus, the additional expense of secondary roads is not cost effective.

5.60.2.5 The socio-economic and biophysical impacts of a secondary road network would be substantially higher than the proposed project as it would require substantially more land than the current proposal.

5.60.3 The closure and/or consolidation and/or relocation of certain private accesses along the R44: The closure or consolidation of private accesses would require the construction of secondary roads parallel to the R44, which would require access at some point along the R44. For practical reasons this option was not considered viable given the amount of third party property involved.

5.60.4 The introduction of turning lanes and tapers: The applicant initially considered closing only certain median openings while leaving some strategic median openings in place. Crossing these median openings would then be facilitated through the addition of turning lanes and tapers allowing for traffic to slow down on the approach and speed up prior to connecting with the fast lane. However, this was not considered feasible as a safety improvement as vehicles would still cross into the fast lane of oncoming traffic.

5.60.5 The introduction of "loons" in order to facilitate U-turns: A loon is a modified U-turn facility consisting of a turning point to left side of the road where vehicles wishing to turn right can exit the R44 to the left, where they can wait out of the traffic flow for a gap in the traffic. When there is a gap they can cross to the median opening and wait for an opportunity to enter the oncoming traffic stream to complete the U-turn manoeuvre. Consideration was initially given to providing a loon to accommodate U-turns near Yonder Hills near Bredell Road. Upon further investigation into the short sight distances and slowing down/ speeding up distances between Yonder Hills and nearby intersections this option was not considered viable. Also, both the horizontal and vertical geometric alignment does not support this type of intervention.

5.61 The following are options proposed by the I&APs and the applicant's response for not considering them further:

Stellenbosch bypass

5.61.1 The Stellenbosch bypass project was initially raised many years ago. It is not seen as a viable alternative to the proposed project for the following reasons:

5.61.1.1 A bypass would not resolve the safety and level of service issues along the R44 for motorists travelling between Somerset West and Stellenbosch. It would simply remove traffic from the northern section of the R44 that is destined for locations beyond Stellenbosch. With an estimated 90% of R44 traffic destined for Stellenbosch (from Somerset West) there would only be a small reduction of traffic volume on the R44.

5.61.1.2 A bypass would be of a similar scale of road as the R44 and would have very high impacts in terms of loss of agricultural land, biophysical and visual impacts.

5.61.1.3 A grade-separated interchange would be required to link a proposed bypass to the existing R44, thus not addressing the current concern of an above-ground interchange.

5.61.2 An additional new road closer to the mountain hills: This proposal would entail a second road of a similar scale to the R44 between Somerset West and Stellenbosch. The scale of this suggested solution is substantial as it would require up to 70 ha of land. It would thus have substantial biophysical and environmental impacts, including a substantial effect on the current land use. There is likely to be a very strong reaction from landowners where substantial portions of highly intensive farm land would have to be acquired. The implications of an additional new road would thus far outweigh the proposed improvements to the R44. In addition, such a new road would still require appropriate link roads with the existing R44, which would likely have to be via the main link roads with an interchange as has been proposed.

Public transport- train system

5.61.3 Trains in South Africa are the responsibility of the Passenger Rail Agency of South Africa. It cannot be considered part of a proposed project by the applicant.

5.61.4 Currently, there is a metro train line running between Somerset West and Stellenbosch via Eerste River. However, many commuters still prefer the convenience of a motor vehicle rather than using a train. Thus, unless people are forced onto trains, they will continue to use more convenient private vehicles.

5.61.5 The merit of considering a public transport option was further considered in the traffic analysis study. The traffic specialist explained that the implementation of public transport initiatives could contribute to a reduction in traffic initially, but that it would not address safety and level of service along the R44 and would need to be supplemented by other interventions.

Public transport- bus lanes

5.61.6 Implementation of a bus system, whether it functions within the median of the R44 (Bus Rapid Transit ("BRT")), along the R44 (normal bus systems) or on a parallel route would be the responsibility of the local municipalities (in this case Stellenbosch Municipality and the City of Cape Town).

5.61.7 Bus services are currently available between Somerset West and Stellenbosch but as mentioned the above commuters still prefer the convenience of using their own vehicles. This might change should a BRT system be implemented as is currently being undertaken in the Cape Town metropolitan area (e.g. My City). The development of such a system would, however, take many more years before it could be fully functional. In the meantime, the unsafe conditions on the R44 would persist. A BRT system is often equated with replacing the commuting motor vehicle. However, a system such as BRT simply reduces the growth of motor vehicle use rather than reducing vehicle numbers. Most big cities in the world have highly developed bus, train and underground transport systems, yet their roads continue to remain extremely busy.

Reducing speed to 60km/h

5.61.8 The R44 is a Class 2 road with mobility as its primary function.

5.61.9 While reducing the speed limit to 60 km/h would allow adjacent landowners easier access similar to a residential suburb, this would have a negative impact on the function of the road and the daily commuters. The road has a posted speed of 100 km/h and reductions in speed to 60 km/h for such a long length of dual carriageway road are not seen by the applicant as being feasible.

Turbo roundabout (roundabout with preselected lanes)

5.61.10 While this type of roundabout has many advantages, it is not considered feasible for the type of road and mobility function of the R44. Such roundabouts are also not well known in South Africa and would likely cause their own traffic problems. In an area where many tourist attractions rely on drive-by clientele, confusion regarding the use of such a roundabout may lead to tourists not being able to reach their destination.

Cycle paths along the length of the R44

5.61.11 A significant number of people use bicycles on sections of the R44 between Somerset West and Stellenbosch, whether for commuting to work or for recreation or training. A shared pedestrian and cycle facility is currently being put in place at the northern end of the project study area by Stellenbosch Municipality. The applicant has agreed in principle that the facility can be extended to Jamestown. The issue of extending the cycle path further southwards may be considered by the applicant. However, this is not specific requirement to meet the main aims of this project. It should be noted that cyclists using the road for training are more likely to use the shoulder of the road than cycle paths.

Construct an additional entrance to Techno Park

5.61.12 A high traffic volume enters Techno Park during the peak traffic hours. Currently, there is only one entrance into the park which causes heavy congestion along the R44 and within Stellenbosch.

5.61.13 The construction of an additional entrance to Techno Park would be the responsibility of the Techno Park Owners Association and not the applicant. Separate agreements would have to be reached with either the Stellenbosch Municipality and/or the applicant should assistance in this regard be required.

5.61.14 This solution would, however, not solve the current problem along the R44 and thus does not form part of the proposed project.

Lowering the existing road level of the R44 to reduce the visual impact of the grade-separated roundabout

5.61.15 To lower the grade-separated roundabout to ground level, would require the vertical re-alignment of the R44 over an approximate distance of 1.4 km. Construction would necessarily require the closing of lanes leading to the unavailability of one lane in each direction for the duration of the construction period. Watercourses crossing the R44 near the Annandale Road intersection would also need to be realigned or diverted for a considerable distance. Significant infrastructure would also be required to ensure adequate drainage from the R44 to a lower point downstream. The anticipated cost for this alternative would be significantly greater than proposed. Due to the extensive works that would need to be undertaken and the costs involved this alternative is not considered feasible.

5.61.16 Alternatives were developed to improve the safety and traffic flow while maintaining road capacity along the R44. A micro-simulation model of the R44 corridor was created to test the traffic related impacts associated with the proposed upgrade alternatives. The modelling process included the evaluation of the R44 travel times, overall average network speed and trip times between major destinations as well as the future capacity constraints of the network.

5.61.17 Initially the proposal included:

5.61.17.1 The closure of most median openings between Somerset West and Stellenbosch to improve safety aspects by eliminating all U-turns, right turns across oncoming traffic, dangerous deceleration and to reduce the number of conflict points;

5.61.17.2 The upgrade of the Steynsrust Road, Bredell Road and Technopark Road intersections;

5.61.17.3 The provision of turnaround facilities by means of grade-separated roundabouts (interchanges) at the Winery Road and Annandale Road intersections to facilitate safe turnaround movements and intersection operations;

5.61.17.4 The closure/consolidation of certain private accesses along the R44 between Somerset West and Stellenbosch;

5.61.17.5 The provision of pedestrian facilities at the interchanges; and

5.61.17.6 The provision of cycling facilities at the interchanges.

5.61.18 During the initial round of public consultation, it became apparent that I&APs did not consider the proposed grade-separated roundabouts as suitable options. Considering the above, two additional alternatives were considered for the interchanges at the Winery Road and Annandale Road intersections, namely:

5.61.18.1 The provision of at-grade two-lane roundabouts, which will result in a smaller footprint than the grade-separated roundabouts; and

5.61.18.2 The provision of signalised intersections, which will result in no change to the existing footprint.

5.61.19 Based on economic specialist input, the preferred alternative for the interchanges at Winery Road and Annandale Road intersections was still presented as the grade-separated roundabouts. Many concerns and objections were however raised against these findings, specifically the visual impact and the effect on the rural landscape character, effects on tourism and direct effects on adjacent landowners. To address this, the project engineers were tasked to look at other possible solutions.

5.61.20 The revised project scheme consisted of the following:

Closing all median openings along the R44 (authorised in the EA):

5.61.21 It is proposed to close 22 median openings between Steynsrust Road and Webersvallei Road. The result would be that all public and private roads as well as private accesses along this section of the R44 would have only left in/left out access from and to the R44. U-turn facilities would be provided at both ends of the road section as well as at Winery and Annandale Roads to limit the additional travel distance to access properties along the R44.

Providing a grade-separated U-turn facility at Steynsrust Bridge (authorised in the EA):

5.61.22 A grade-separated U-turn bridge (in the form of a horseshoe) is proposed adjacent to and just north of the existing Steynsrust Bridge, with on- and off-ramps within the existing road reserve. The facility provides deceleration turning lanes facilitating access to Old Stellenbosch Road and Zandberg Road. The purpose of this facility would be to provide southbound traffic wishing to go north with the opportunity to make a U-turn without accessing the local road network. Thus, traffic generated by the median closures along the R44 would not affect the surrounding municipal road network.

Providing a left in/left out access to Bredell Road (authorised in the EA):

5.61.23 It is proposed to close the existing median openings to Bredell Road and the Klein Helderberg Road, providing left in/left out access to both roads. Improvements at the Bredell Road Intersection would entail the provision of a deceleration turning lane and an acceleration entry lane as well as a triangular splitter island at the exit/entry point.

Providing a grade-separated turning facility at Winery Road.

5.61.24 Two alternatives were considered, namely:

Alternative 1: Grade-separated roundabout interchange, above ground (Preferred Alternative authorised in the EA):

5.61.25 The grade-separated roundabout would be located at the existing intersection and alignment of Winery Road with the R44. The Winery Road's vertical alignment would be steepened to tie in with the grade-separated roundabout which would, in turn, be linked to the R44 via on-and-off ramps. Pedestrian walkways and cycling lanes

would be included in the ramps and the roundabout. Provision would also be made on all four of the ramps for taxi drop off / pick up embayments. Access to the Ken Forrester Wine Estate would be directly opposite the access road to the smallholdings located to the north of Winery Road. The eastern edge of the roundabout would extend onto the Avontuur Estate property. The Avontuur Estate's existing access would be relocated so as to provide direct private access from the roundabout itself. It is proposed that the grade-separated roundabout would have 1:2 slope embankments to mitigate the potential visual impact. The slopes would be vegetated with appropriate vegetation to blend in with the surrounding landscape. Approximately 2.0 ha of land outside the road reserve would have to be obtained from the adjacent landowners.

5.61.26 As an alternative to the embankments and to minimise land-take, it would be possible to construct the embankments with a combination of vertical retaining walls and sloped embankments. This option could reduce the total land required for the interchange from private landowners to approximately 1.3 ha. The drawback of vertical retaining walls is that the visual impact of such structures would be higher initially, but could be reduced by vegetation screening that would become more effective with time. This alternative would result in the most efficient network travel times because of facilitating free-flow conditions for both directions of travel along the R44 while the side road traffic would experience minimal delays. Either of these options are acceptable for implementation.

Alternative 2: Grade-separated diamond interchange, below ground:

5.61.27 This would entail placing the Winery Road interchange approximately 7 to 8m below the existing ground level, i.e. the R44 grade line. Access to the Ken Forrester Wine Estate and the Avontuur Estate property would be similarly aligned as above for the grade-separated roundabout. The R44 dual carriageway would retain its existing grade line, but would be located on bridge decks passing over the below-ground structure. Approximately 2.5 ha of land outside the road reserve would have to be obtained from adjacent landowners. Street lighting would be limited to the on- and off ramps and within the interchange area, which would be below ground. The below-ground interchange would have to make provision for an underground stormwater system (a gravity system) to remove stormwater from the lowest point of the interchange. Water may accumulate from groundwater seepage and/or from stormwater. Due to the topography falling to the west, a stormwater drain would be placed in the Winery Road interchange ramps and would emerge at the western limit of construction. The stormwater would then continue westwards in a lined side drain of Winery Road.

5.61.28 This option is not preferred as the footprint is more extensive, construction takes longer, has higher construction costs than above ground construction and results in far greater traffic disruption during the construction phase. Costs would furthermore be significantly increased by any rock being encountered during construction, a highly likely scenario in this region.

Providing a grade-separated turning facility at Annandale Road.

5.61.29 Two alternatives were considered, namely:

Alternative 1: Grade-separated roundabout interchange, above ground (authorised in the EA):

5.61.30 The R44 and Annandale Road intersection is a key intersection on the route providing regional connectivity between the R44 and the R310 into Stellenbosch. Like the Winery Road intersection, it is proposed to construct a grade-separated roundabout at this location. The roundabout would be off-set to the south of the existing intersection requiring the realignment of Annandale Road from both sides as it approaches the interchange. The approximate land acquisition requirement would be 3.3 ha.

5.61.31 The interchange would require the realignment of several existing access points to the surrounding properties which will include:

5.61.31.1 A relocation of the existing entrance onto Farm 540 (Zetler's packing plants and the Zetler residence) from Annandale Road;

5.61.31.2 A new entrance to the existing servitude access linking the remainder of Farm 537 (Root 44 Market) to Annandale Road via a relocated access 250m along Annandale Road.

5.61.31.3 A new point of access from the southbound R44 on-ramp onto Portion 20 of Farm 537. This point would also provide for Mooiberge Farmstall traffic to exit directly onto the R44; and

5.61.31.4 A new point of access from the southbound R44 off-ramp to the remainder of Farm 537. This point would also provide for Root 44 Market traffic to exit directly onto the R44. This would reduce the traffic volume using access to Root 44 from Annandale Road (this is a new access not provided in the Draft BAR).

5.61.32 As an alternative to the embankments and to minimise land-take, it would be possible to construct the embankments with a combination of vertical retaining walls and sloped embankments. This option could reduce the total land required for the interchange from private landowners to approximately 2.8 ha. Vertical retaining walls would have a lower impact on the heritage resources at the intersection. Either of these options are acceptable for implementation.

Alternative 2: Grade-separated diamond interchange, below-ground (the authorised alternative in this Appeal EA):

5.61.33 This alternative would entail a below-ground grade-separated diamond interchange with Annandale Road passing below the R44. Access roads to surrounding properties would be similarly aligned as described above for the grade-separated roundabout. The R44 dual carriageway would retain its existing grade line but would be located on bridge decks passing over the below-ground structure. Approximately 3.8ha of

land outside the road reserve would have to be obtained from the adjacent landowners. The stormwater drainage system would be aligned along the R44 to the north as the topography falls in this direction to a low point at a small stream (a tributary of the Bonte River) approximately 220m north of the interchange. It would also be possible to construct the embankments with a combination of vertical retaining walls and sloped embankment, which could reduce the total land required from private landowners to approximately 2.5ha. The footprint of the interchange using vertical retaining walls would be similar to that for the above-ground roundabout alternative.

5.61.34 This alternative addresses the current issues of traffic congestion and safety issues.

Providing a turning facility near Jamestown, which would allow vehicles travelling from the south to make a U-turn:

5.61.35 To access properties located along the eastern side of the R44 between Jamestown Cemetery and Annandale Road; and

5.61.36 Vehicles departing from properties located along the western side of the R44 north of Annandale Road would require a U-turn facility to proceed in a southerly direction.

5.61.37 Three alternatives were being considered for this purpose, namely:

Alternative 1: A grade-separated U-turn bridge near Jamestown Cemetery:

5.61.38 This alternative is similar to the Steynsrust Road U-turn facility, namely a dedicated U-turn bridge over the R44 in the form of a horseshoe, with an on- and off-ramp to the R44, which would allow turns in only one direction. It would be located in the vicinity of Jamestown Cemetery. This facility would provide for U-turn movements without conflicting with the movement of traffic on the R44. This alternative is not preferred as it would require widening of the road reserve by approximately 5m on each side of the R44 and approximately 0.2ha of land would have to be acquired from an adjacent landowner and the Jamestown Cemetery.

5.61.39 Alternative 2: An at-grade teardrop turning facility near Jamestown Cemetery:

5.61.40 This is an at-grade, dedicated U-turn teardrop facility alternative, which is also located adjacent to Jamestown Cemetery. It would entail the provision of a turning lane located between the two carriageways. To accommodate the U-turn facility, the northbound carriageway of the R44 would have to be relocated over approximately 500m, resulting in an extension of the road reserve boundary approximately 12m to the north-west. The key disadvantage of this facility is that U-turning traffic would have to slow down to enter the facility while travelling in the fast lane of the northbound carriageway and exit the teardrop into oncoming traffic using the fast lane of the southbound carriageway. This alternative is not preferred as, from a technical and safety perspective, the option of traffic slowing down and accelerating from / into the fast lane is not supported by the DTPW.

Alternative 3: Accommodating U-turn movements at the Webersvallei Road signalised intersection (Preferred Alternative authorised in the EA).

5.61.41 The third alternative proposed for accommodating U-turning traffic between Annandale Road and the Webersvallei Road, is to accommodate movements at the existing Webersvallei Road Intersection. The upgrading of this signalised intersection forms part of the proposed improvements to ease congestion at the Stellenbosch end of the R44. This would entail widening the road to add turning lanes to both the west and east and providing three through lanes in each direction. These improvements would provide sufficient space to accommodate U-turns of heavy vehicles at the traffic lights. It should be noted that this alternative is based on existing traffic generated between Annandale and Webersvallei Roads. It does not take into consideration any traffic implications that could potentially occur because of changes in land use along the R44 between these roads.

Improving at-grade signalised intersections within the Stellenbosch municipal area between Webersvallei Road and the end of the project at Van Rheede Street (authorised in the EA).

5.61.42 This would entail road widening to provide turning lanes and three through lanes in each direction at the following five intersections:

5.61.42.1 Webersvallei Road (km 29.6);

5.61.42.2 Techno Park (km 30.3);

5.61.42.3 Blaauwklippen Road (km 31.2);

5.61.42.4 Trumali Road (km 32.0); and

5.61.42.5 Van Rheede Road (km 32.9).

Additional safety measures (authorised in the EA):

5.61.42.6 Implementing average speed over distance ("ASOD") control; and

5.61.42.7 Accommodating pedestrian and cycling facilities in the interchange design.

"No-Go" Alternative

5.61.43 The "*no-go*" option was considered and is not preferred. By not implementing the proposed road upgrades the historic features at Winery and Annandale Roads will not be impacted, there will be no negative visual impact, no change to the quality of the R44 as a scenic route or to the surrounding cultural landscape and adjacent landowners and tourists will have continued direct access to and from the R44 to their homes and businesses. The unsafe traffic conditions would however remain and worsen as traffic volumes along the R44 continue to increase. Without the required road upgrades, traffic congestion will also continue to increase and become even more problematic over time. Furthermore, road safety for pedestrians and cyclists would not improve at affected intersections. Essentially, already unacceptable, unsafe road conditions for motorists, pedestrians and cyclists will persist and become more hazardous over time.

5.62 Considering the above, adequate alternatives have been considered with regards to the proposed development to meet the minimum requirements of the applicable legislation.

Applicant should have followed a full Scoping and Environmental Impact Reporting process

5.63 Regulation 20(3) of the applicable 2010 EIA Amendment Regulations state the following:

"If an applicant intends undertaking an activity to which basic assessment must be applied in terms of subregulation (1) and the applicant, on the advice of the EAP managing the application, is for any reason of the view that it is unlikely that the competent authority will be able to reach a decision on the basis of information provided in a basic assessment report, the applicant may apply, in writing, to the competent authority for permission to apply S&EIR instead of basic assessment to the application."

5.64 Regulation 20(4) of the applicable 2010 EIA Amendment Regulations further state the following:

"If an applicant intends undertaking an activity to which S&EIR must be applied in terms of subregulation (2) and the applicant, on the advice of the EAP managing the application, is for any reason of the view that it is likely that the competent authority will be able to reach a decision on the basis of information provided in a basic assessment report, the applicant may apply, in writing, to the competent authority for permission to apply basic assessment instead of S&EIR to the application."

5.65 The BAR states that the 2010 EIA Amendment Regulations promulgated in terms of the NEMA provide for the control of certain activities that are listed in Government Notices No. R. 544, R. 545 and R. 546 of 18 June 2010. Activities listed in these notices must comply with the regulatory requirements listed in Government Notice No. R. 543 of 18 June 2010, which prohibits such activities until written authorisation is obtained from the competent authority. Such an EA, which may be granted subject to conditions, will only be considered once there has been compliance with the 2010 EIA Amendment Regulations. Government Notice No. R. 543 of 18 June 2010 also sets out the procedures and documentation that need to be complied with in undertaking a Basic Assessment process. The proposed project includes activities contained in Listing Notices 1 (Government Notice No. 544 of 18 June 2010) and 3 (Government Notices No. R. 546 of 19 June 2010).

5.66 When the I&APs stated, during the PPP, that the applicant applied an incorrect procedure in respect of obtaining an EA for its proposed project, in the comments and responses report, the EAP responded as follows:

5.66.1 No relevant listed activities apply that trigger a Scoping and EIA processing to be followed.

5.66.2 The scale of this Basic Assessment process is similar to that of a Scoping and EIA process. This is based on the scope of information collected, the seven specialist studies undertaken and amended, including the review of and additional HIA, and the various opportunities for review and comments provided as part of the ongoing PPP.

5.66.3 In a Scoping and EIA process the EIA information would have presented and assessed the same information as was presented in the Basic Assessment information. What is at issue in the competent authority's consideration and decision-making regarding the application, is that all the relevant issues have been assessed, that I&APs have been provided an opportunity to comment and that responses are provided to the comments.

5.67 Considering the above, the Basic Assessment process is deemed adequate to the magnitude of the impacts of the proposed project and the competent authority has adequate information necessary to make an informed decision.

Cooperative governance

5.68 This ground of appeal was previously raised and addressed during the Basic Assessment process as follows:

5.68.1 The applicant, as the provincial roads authority, accepts and supports the constitutional principle of cooperative governance. Thus, the applicant exercises its power and performs its function as a road authority in a manner that does not encroach on the geographic, functional or institutional integrity of other spheres of government. Within this context, the applicant consulted with the national and local counterparts when planning the proposed project. Several meetings have taken place between the applicant, HWC, Stellenbosch Municipality and the City of Cape Town, respectively regarding the proposed project.

5.68.2 The aim of the project is to improve the safety of the R44 while maintaining its capacity and mobility along the route. The identified solution to the safety problems of closing the median openings along the R44 requires the provision of U-turn facilities to provide access to link roads and properties along the way. This must be achieved without compromising the capacity and mobility of the R44 due to its status as a mobility corridor that forms a strategic link between Somerset West and Stellenbosch at a regional transport planning level. Thus, the project design entails a range of improvements which aim to solve the problem collectively. The study area is defined and limited to the R44 from Steynrust Interchange to Van Rheede Street, which is the jurisdiction of the applicant. The project scope does not cover the municipal areas of Somerset West and/or Stellenbosch. It can therefore not attempt to provide solutions to traffic problems within the municipal road networks of these areas.

5.68.3 This limited scope of the proposed project does not mean that the applicant does not recognise the provincial planning context, including the approach expressed in the PSDF to shift from private to public transport. The integrated transport plans of both local authorities have been taken into consideration as part of the broader policy framework within which the proposed project should be contextualised. It was confirmed that the project proposals are compatible. Thus, thus implementation of this project would not preclude the development of initiatives in the integrated transport plans. However, the project cannot resolve all transport-related issues in the two municipal areas by means of pursuing the aim of improving safety conditions

while accommodating the increasing numbers of road users and commuters travelling between Somerset West and Stellenbosch.

5.69 Before issuing the EA, after the Addendum report to the original HIA was received from Mr Chris Snelling, further meetings dated August and October 2017 were held between the relevant authorities i.e. the competent authority, HWC and the applicant.

The EAP failed to comply with public participation requirements of the EIA Amendment Regulations, 2010

5.70 Section 24O(3) of the NEMA requires that:

"A State department consulted in terms of subsection (2) must submit comment within 30 days from the date on which the ... MEC or environmental assessment practitioner requests such State department in writing to submit comment."

5.71 The general objectives of integrated environmental management, under sub-section 23(2) of the NEMA, is to:

"(d) ensure adequate and appropriate opportunity for public participation in decisions that may affect the environment;"

5.72 To give effect to the NEMA requirements, regulation 54 of the 2010 EIA Amendment Regulations requires the following:

"(2) The person conducting a public participation process must take into account any guidelines applicable to public participation as contemplated in section 24J of the Act and must give notice to all potential interested and affected parties of the application which is subjected to public participation..."

5.73 In the comments and responses report, the EAP stated that:

5.73.1 Many submissions stated that the project team pushed ahead without considering objections to project proposals and presented the same proposals at each round of the PPP.

5.73.2 This is not the case. The action taken in response to comments and objections is described in detail in the revised Final BAR. The range of alternatives considered and the reasons why some of them were not investigated in more detail is described in the BAR, as was the in-depth investigation of a range of alternatives. This resulted in a revised project scheme presented in the Revised Draft BAR which included additional components in response to the I&APs submissions, e.g. a grade-separated U-turn facility at Steynrust to avoid U-turning traffic entering the existing urban road network in the area; closure of all median openings at Bredell Road and Klein Helderberg road intersections as requested by the local school management; improvements at signalised intersections from Webersvallei Road to Van Rheede Street in Stellenbosch to alleviate congestion at peak hours at these intersections. Furthermore, an additional alternative in the form of a below-ground grade-separated interchange was proposed, assessed and compared with the above-ground grade-separated roundabout alternative for the U-turn facilities at Annandale and Winery Road intersections. It is thus not accurate to state that objections and comments were disregarded throughout the Basic Assessment process while the fact is that considerable time and effort were expended on exploring a wide range of alternatives.

5.73.3 It is also not accurate to posit that the project team failed to generate lower impact alternatives. A full range of alternatives were considered, reconsidered and investigated in detail. The so-called lower impact alternatives, in the form of at-grade roundabouts and signalised intersections were assessed in the Draft BAR. Considering the public outcry against the findings of the Draft BAR that the grade-separated roundabouts would be the most efficient alternative, various combinations of at-ground roundabouts and signalised intersections were subjected to in-depth traffic analysis. This confirmed that findings that these alternatives would not be efficient in the light of the high traffic volumes along the R44.

5.73.4 Many I&APs also stated that their previous input had not been addressed while some regarded responses provided in the previous comments and responses reports as inadequate or dismissive. The EAP expended considerable time and effort on reviewing and collating comments and on considering and formulating responses to all comments, as well as referring comments to relevant respondents for considered responses.

5.73.5 The fact that I&APs do not agree with the responses do not render them invalid.

5.74 As detailed in the reasons for the EA it is concurred with the applicant's responding statement that the following PPP was conducted in this application:

Background Information Document

5.74.1 Between 1 February 2013 to 22 March 2013, a commenting period which was supposed to run from 1 February 2013 to 8 March 2013 was extended by 14 days from 8 March 2013 to 22 March 2013. This Background Information Document public participation process was conducted although it was not required in terms of the applicable 2010 EIA Amendment Regulations.

Draft BAR

5.74.2 A commenting period which was supposed to run for a period of 40 days from 2 April 2014 to 19 May 2014 was extended to 30 May 2014 to accommodate public holidays in April 2014 and May 2014.

Revised Draft BAR

5.74.3 A commenting period which was supposed to run for a period of 40 days from 1 March 2016 was extended to 13 April 2016 to accommodate three public holidays.

Final BAR

5.74.4 A commenting period which was supposed to run for a period of 30 days from 12 December 2016 was extended to 30 January 2017 to accommodate the holiday

period from 15 December to 2 January. On 16 January 2017, a reminder was sent to the registered I&APs to inform them about the closing date for comments.

5.74.5 A 40 days period was undertaken although the competent authority only required a commenting period to be only 21 days as the Draft BAR commenting period was already done for 40 days. This was done to accommodate the requests for the extension of the period for the submission of comments that were received from the registered I&APs.

Revised Final BAR

5.74.6 A public participation process was conducted from 23 November 2017 to 14 December 2017.

5.74.7 The appellants further contend that the Minister of Transport and Public Works, had undertaken, at a meeting held in August 2017, to arrange for workshops and/or follow-up meetings, which did not take place.

5.74.8 The applicant addressed the matter with the competent authority in its letter of submission in respect of the Revised Final BAR, item 4.4, dated 15 January 2018. In addition, the information contained in item 4.4 of the submission letter had been communicated to the members of the public present at the meeting with the Minister.

5.75 The extension of the commenting period over the festive season was done in compliance with the competent authority's Guideline on public participation which must be considered when undertaking the PPPs in terms of the applicable legislation. The Guideline on public participation states that *"The period of 15 December to 2 January must be excluded in the reckoning of days. Where a timeframe is affected by the 15 December to 2 January period, the timeframe must be extended by the number of days falling within the 15 December to 2 January period. Where a timeframe is affected by one or more public holidays, the timeframe must be extended by the number of public holiday days falling within that timeframe."*

5.76 The public meeting presented by the Executive Mayor of Stellenbosch Municipality on 15 August 2017 was a meeting initiated by the Stellenbosch Municipality outside of the legislated Basic Assessment process undertaken for this application.

5.77 Considering the above, the I&APs were afforded adequate opportunities to make written representations and their comments were responded to and addressed in the EIA process.

CONCLUSION:

In view of the above, the NEMA principles, compliance with the conditions stipulated in the Appeal EA and compliance with the conditions of the EMP, the proposed activities will not conflict with the general objectives of integrated environmental management stipulated in Chapter 5 of the NEMA and any potentially detrimental environmental impacts resulting from the activities can be mitigated to acceptable levels.

DISCLAIMER:

The Western Cape Government, the Local Authority, committees or any other public authority or organisation appointed in terms of the conditions of this EA shall not be responsible for any damages or losses suffered by the holder, developer or his/her successor in any instance where construction or operation subsequent to construction is temporarily or permanently stopped for reasons of non-compliance with the conditions as set out herein or any other subsequent document or legal action emanating from this decision.

Yours faithfully

ANTON BREDELL
MINISTER OF LOCAL GOVERNMENT,
ENVIRONMENTAL AFFAIRS AND DEVELOPMENT PLANNING

DATE: 27/8/2019

Copied to:
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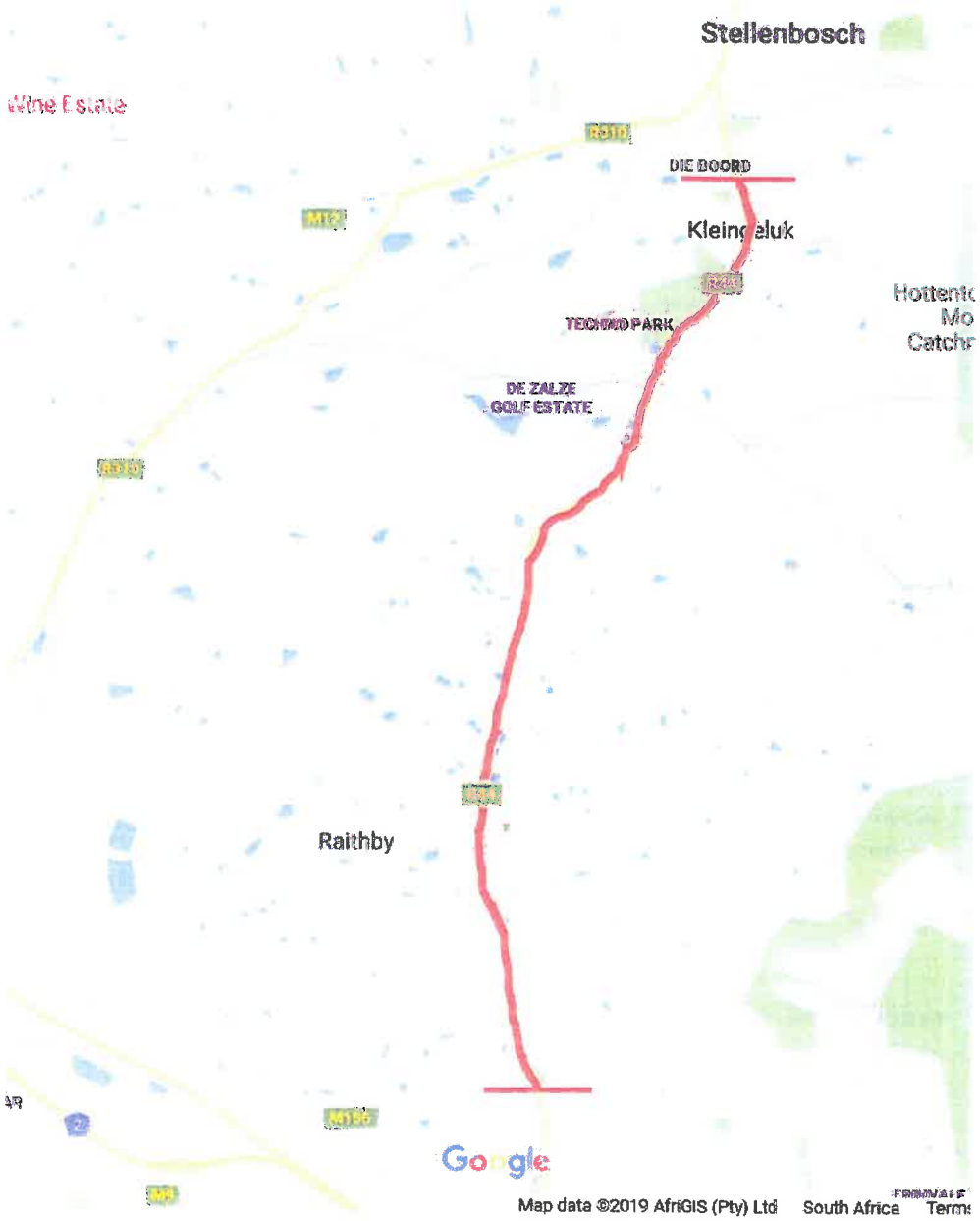
ANNEXURE 1

ANNEXURE 2: U-TURN FACILITY AT STEYNSRUST BRIDGE



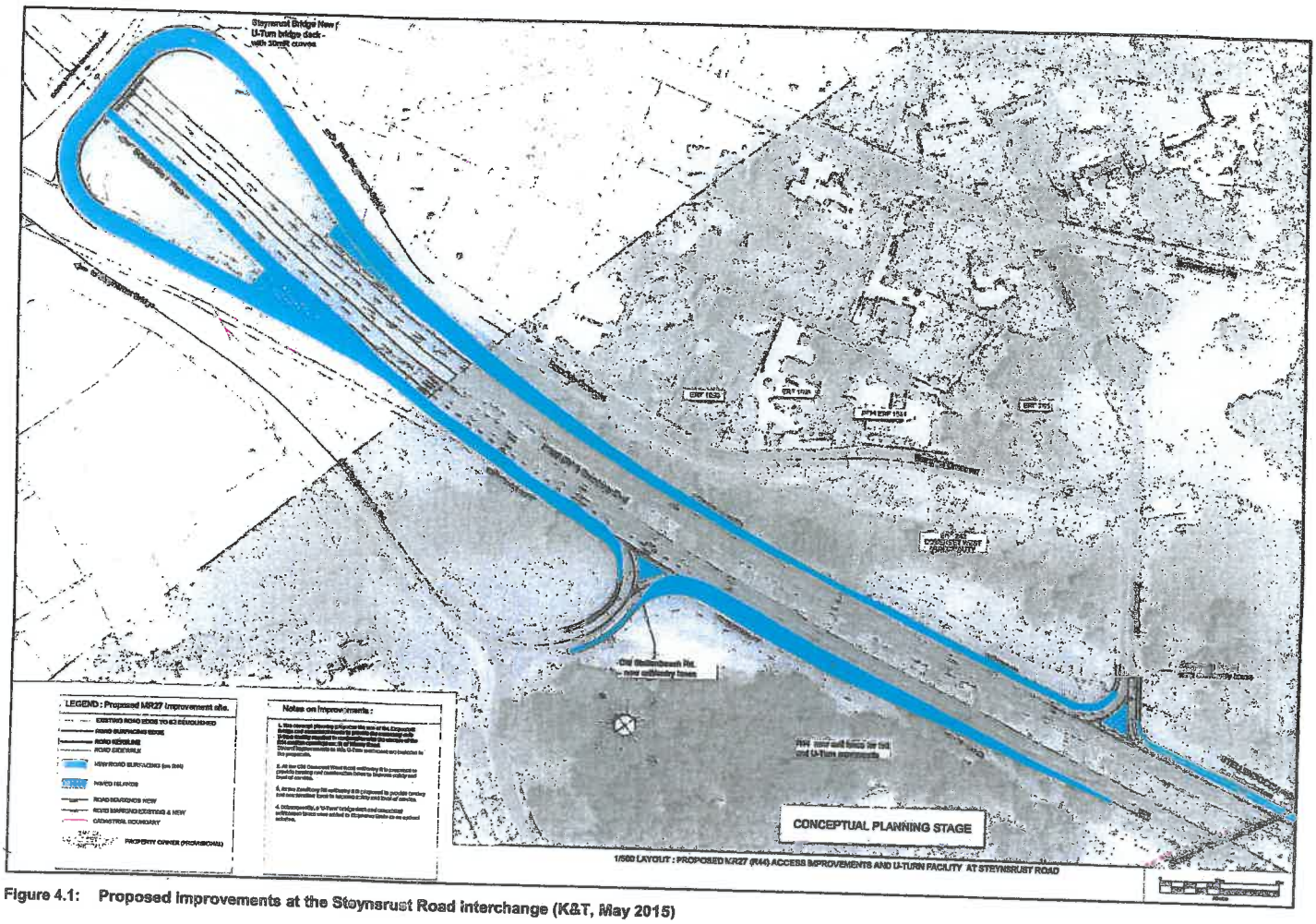


Figure 4.1: Proposed improvements at the Steynsrust Road interchange (K&T, May 2015)

ANNEXURE 3: LEFT IN/ LEFT OUT ACCESS TO BREDELL ROAD

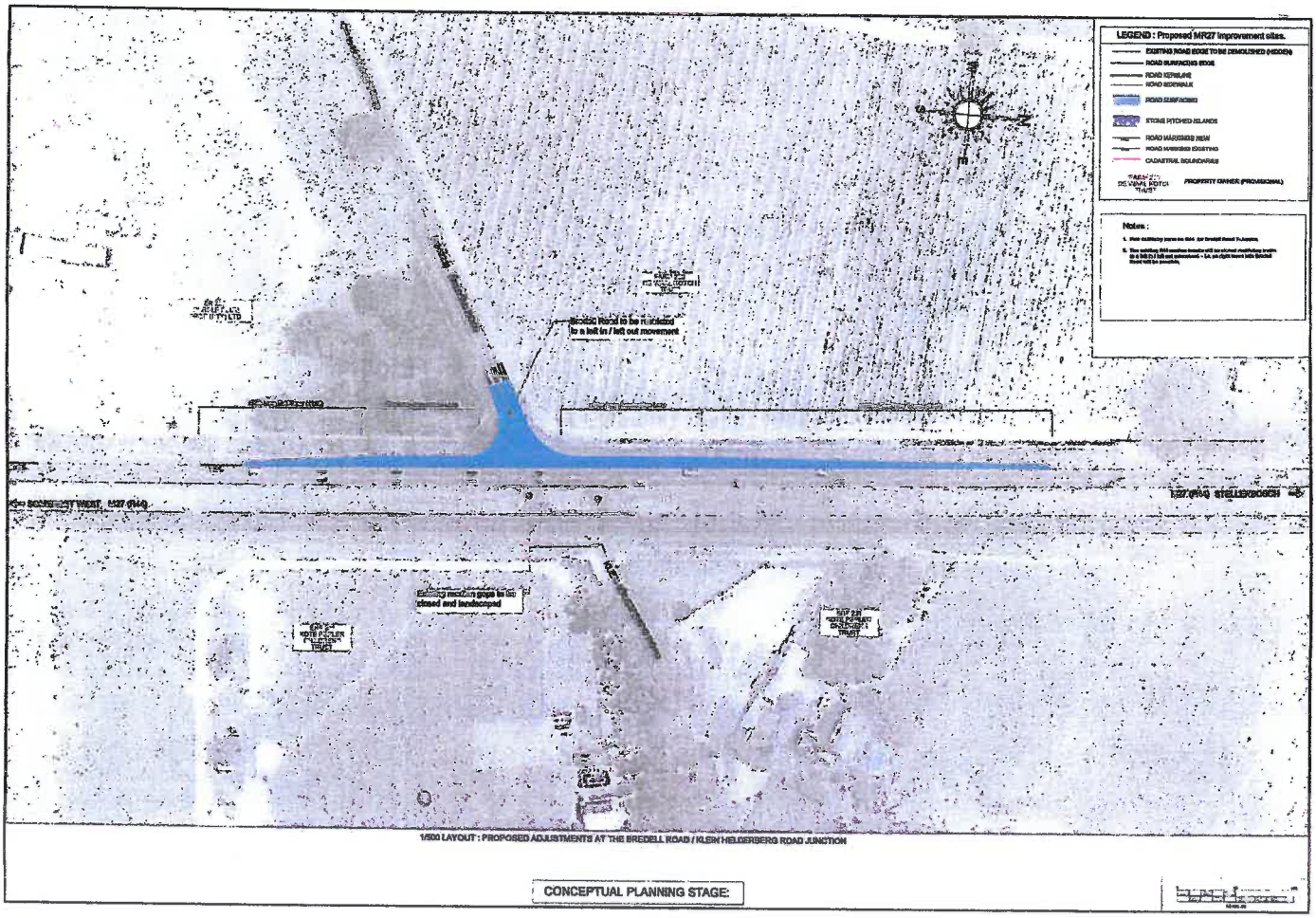


Figure 4.2: Proposed adjustments at Bredell Road / Klein Helderberg Road (K&T, May 2015)

ANNEXURE 4: ABOVE-GROUND GRADE-SEPARATED TURNING FACILITY AT WINERY ROAD

ANNEXURE 5: BELOW-GROUND GRADE-SEPARATED TURNING FACILITY AT ANNANDALE ROAD

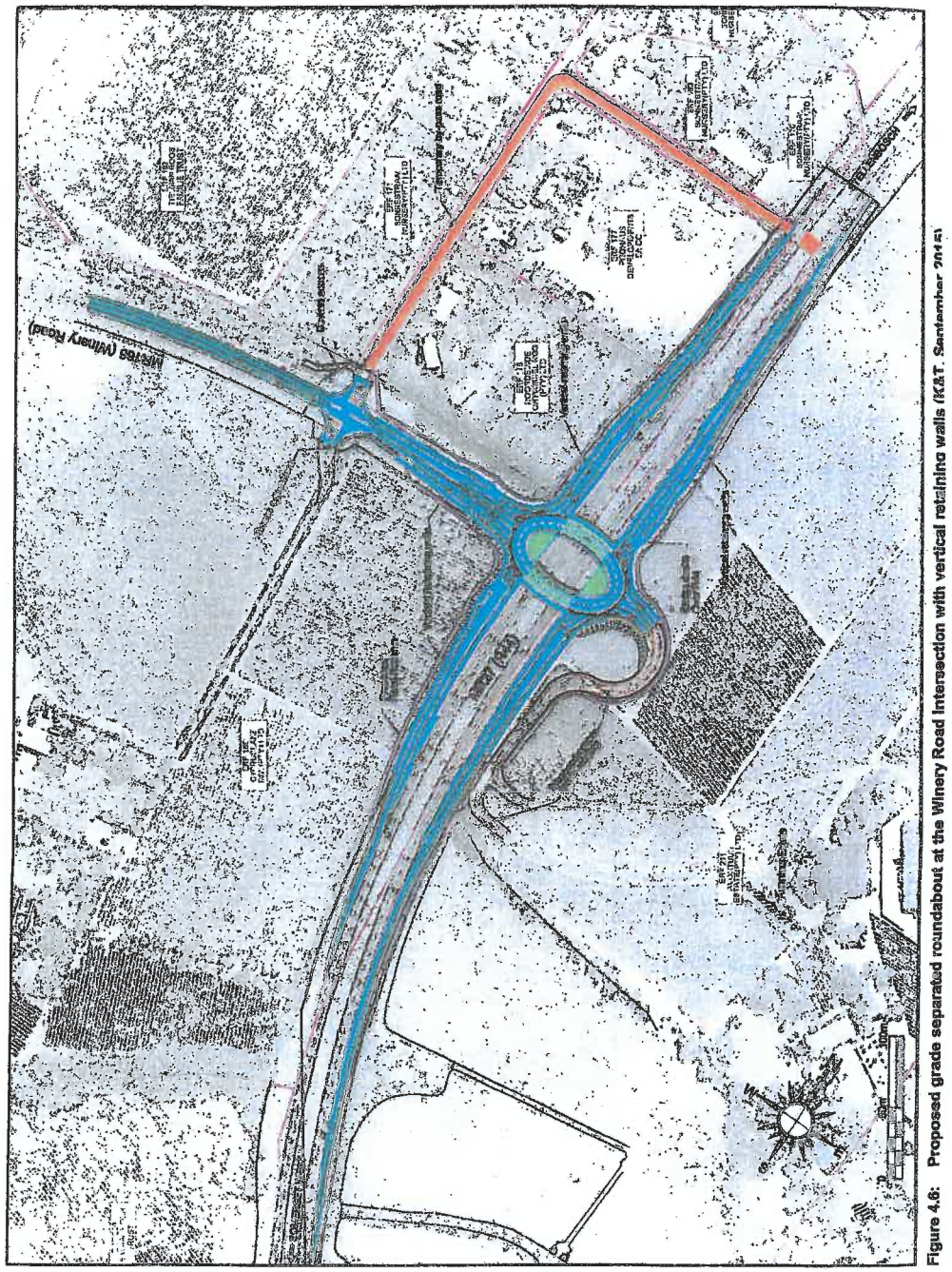


Figure 4.6: Proposed grade separated roundabout at the Winery Road intersection with vertical retaining walls (K&T, September 2015)

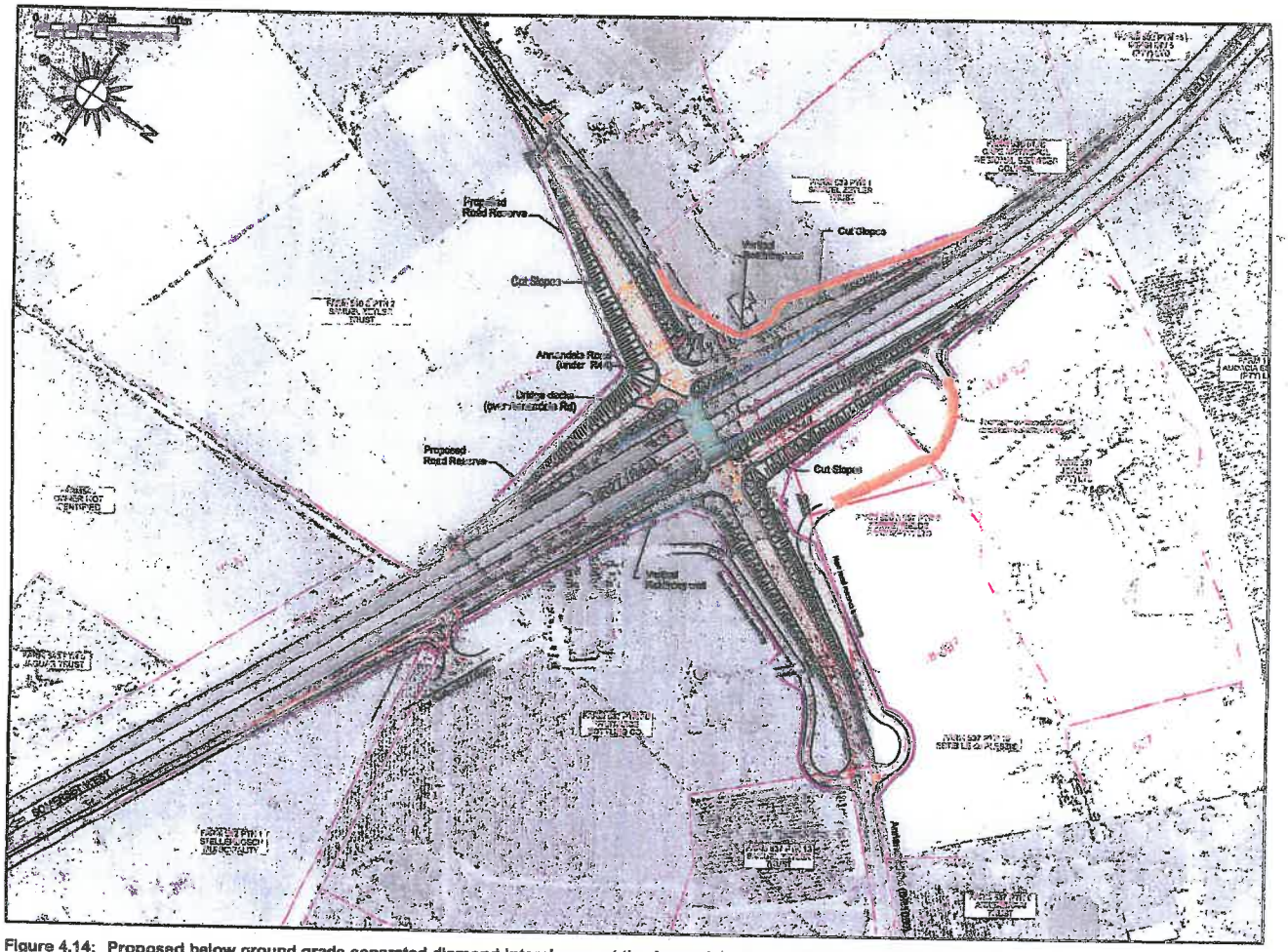


Figure 4.14: Proposed below ground grade-separated diamond interchange at the Annandale Road intersection (K&T, May 2015)