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CHAPTER 11: SYNTHESIS

11.1 ENVIRONMENTAL IMPACT ASSESSMENT

This EIA process for the proposed N21 (R300) Cape Town Ring Road project has been undertaken in accordance with the EIA Regulations published in Government Notice R1182 to R1184 of 5 September 1997, in terms of the Environment Conservation Act, 1998 (No 73 of 1989), as well as the National Environmental Management Act, 1998 (NEMA; No 107 of 1998). This EIA process has aided the identification of a preferred route alignment. The determination of a preferred alignment has, over time, taken cognisance of aspects considered to be limiting constraints to both the environment (social and biophysical) and the overall project success (e.g. economics, technical feasibility, etc).

The essence of all EIA processes is aimed at ensuring informed decision-making and environmental accountability. Furthermore, it assists in achieving environmentally sound and sustainable development. In terms of NEMA (No 107 of 1998), the commitment to sustainable development is evident in the provision that *"development must be socially, environmentally and economically sustainable ... and requires the consideration of all relevant factors ..."*. In addition, the preventative principle is required to be applied, i.e. that the disturbance of ecosystems and loss of biological diversity are to be *"...avoided, or ... minimised and remedied"* and *"disturbance of the landscape and the nation's cultural heritage is avoided and where it cannot be altogether avoided is minimised and remedied"*.

Therefore negative impacts on the environment and on people's environmental rights (in terms of the Constitution (Act 108 of 1996)) should be anticipated and prevented, and where they cannot be altogether prevented, they must be minimised and remedied in terms of "reasonable measures". "Reasonable measures" implies that *"every person who causes, has caused or may cause significant pollution or degradation of the environment must take reasonable measures to prevent such pollution or degradation from occurring, continuing or recurring, or, in so far as such harm to the environment is authorised by law and cannot reasonably be avoided or stopped, to minimise and rectify such pollution or degradation of the environment"*.

The conclusions of this EIA are the result of comprehensive studies and specialist assessments (refer to Volumes 3 – 5), which were initiated in January 2002. These studies were based on issues identified within the Scoping Phase, as well as the parallel process of public participation. The public participation process has been extensive, and every effort has been made to include representatives of all stakeholders in the study area (refer to Volume 2).

This EIA considers the Initial Construction Works (ICW) which is to be undertaken in the first 3 years of the concession contract. This construction phase will be required to be in compliance with the Environmental Management Plan (EMP), which has been compiled based on the recommendations of this EIA. This EMP makes provision for regular site audits and reporting during the lifetime of the project, and is subject to approval by the National Department of Environmental Affairs and Tourism (DEAT) and the provincial environmental authorities.

11.2 EVALUATION OF THE PROPOSED PROJECT

The preceding chapters and the specialist reports provide a detailed assessment of the environmental impacts on specific components of the biophysical and social environments associated with the proposed road project. This chapter concludes the EIA process by providing an evaluation of the environmental impacts of this proposal. In doing so, it draws on the information gathered as part of the EIA process, and the knowledge gained by the environmental consultants during the course of undertaking the EIA.

Tables 11.1 and 11.2 summarize the social and biophysical impacts identified in terms of their degrees of significance, both before and after mitigation.

11.2.1 Summary of Social and Biophysical Impacts

The urban area of the CMA has road reserves running through it, which are utilised by this proposal. The 'greenfields' areas traversed by the proposed road comprise of farmland and coastal wetlands. It has been found that some areas of road reserve and some of the greenfields areas have become significant for biological diversity protection and/or for recreation and environmental education. This is due to the fact that the demarcation of the road reserve (and thus the 'non-use' of it) has not disturbed the floral species therein.

It is anticipated that the majority of the impacts identified in this report can be mitigated to an acceptable level given that the SANRAL polices the successful tenderer (Refer to Tables 11.1 and 11.2 for a list of the social and biophysical impacts identified and their significance before and after mitigation). Those that remain of a high negative significance after mitigation include:

a. *Social – High Negative Significance*

i. **Economic impact on the proposed False Bay Ecology Park (FBEP) in Sector 1**

The economic assessment notes that the proposed road could potentially impact on the viability of the proposed FBEP both beneficially and detrimentally, however until a decision is taken on the proposed FBEP, mitigation measures cannot be fully negotiated.

The economic impact assessment also calculated that the monetary value of the economic benefits of the proposed project would outweigh the estimated monetary value of the wetlands that would be affected by the proposed alignment of the R300. However, it is not clear that a monetary comparison of costs and benefits is, in this instance, an appropriate comparison. The societal benefits of a road project are very different to the societal benefits of a wetlands area.

In the absence of the proposed FBEP, the conclusion that could be drawn is that the proposed alignment in Sector 1 of the route is generally acceptable. Should the proposed FBEP go ahead, then it is clear that the proposed project would impact on it. What cannot be determined is the degree of the impact and whether the proposed alignment constitutes a 'fatal flaw' to the proposed FBEP. The key issue is whether the proposed FBEP and the proposed road could co-exist.

The issue about the proposed road alignment and the proposed FBEP are strategic decision that must be taken at a policy level.

ii. **Impact on sense of place of conservation areas in Sector 1**

The 'sense of place' of the conservation areas – Zandvlei, Zeekoevlei and Rondevlei – in Sector 1 could be affected. If efforts are made to limit noise and visual impacts as far as possible to these areas, 'sense of place' could be preserved to a certain extent.

iii. **Anticipated changes in landscape character through agricultural landscape in Sector 3**

From a visual perspective, the proposed road would change the character of the agricultural landscape through which it would traverse. The impact remains high after mitigation, as it would be experienced beyond the site boundary and it would be permanent. If implementation of all recommended noise and visual mitigation measures occurs, this impact would be limited to a small degree.

iv. **Visual impact from structures sited within agricultural land in Sector 5**

The mainline toll plaza, proposed to be sited between the Vanguard Drive and Strandfontein interchanges, would have a high visual impact, as it would be sited within agricultural land, which has low visual absorption capacity. If the recommended mitigation measures are implemented, the impact could lessen over time.

b. *Biophysical – High Negative Significance*

In terms of the negative impacts of high significance, the following were identified:

i. Aquatic Ecosystems: Road reserve north of the Westlake Wetland and Flora: Westlake Wetland Complex

From an aquatic ecosystem viewpoint, the anticipated impacts are the reduced buffer width and terrestrial habitat between the wetland and residential area and increased disturbance from the road on the wetland. From a botanical viewpoint, the anticipated impacts are the loss of wetland and associated plants, specifically the population of *Passerina paludosa* (a rare species), and the negative effects elsewhere in the system.

It should be noted that this area is located within a space dedicated for road reserve that is owned by the CCT (Refer to Table 6.1 in Chapter 6). The route through this area is included in the City's planned transport network (Refer to Figure 2.4 in Chapter 2) and would form part of any major road proposal in the south (e.g. upgrade of Baden Powell Drive).

ii. Aquatic Ecosystems: Road reserve north of Zandvlei Bird Sanctuary and Flora: Loss of Cape Flats Dune Thicket north of Zandvlei Reserve

Impact on the aquatic ecosystems would occur through the loss of plants that do not occur elsewhere in the Zandvlei Nature Reserve, the small populations of mammals, the leopard toad and other frogs as well as the butterflies that utilize the area. In addition to this, are the impacts of reduced buffer width between Zandvlei and the urban area and disturbance from the proposed road on the wetland area identified. Botanically, the impacts would be loss of a strip of Cape Flats Fynbos/Thicket Mosaic vegetation.

Again, this area is located within a space dedicated for road reserve that is owned by the CCT (Refer to Table 6.1 in Chapter 6). The route through this area is included in the City's planned transport network (Refer to Table 2.4 in Chapter 2) and would form part of any major road proposal in the south (e.g. upgrade of Baden Powell Drive).

iii. Flora: Corridor between Capricorn and Rondevlei Nature Reserve

The flora located in this area is important within the broader context of the biodiversity network of the City (Refer to Figure 4.1 in Chapter 4). It is, however, located in an area indicated as a proposed route on the approved transport plan for the City. It is important that this issue would be relevant to any of the proposed alternative alignments in this area (e.g. upgrade of Baden Powell Drive through the proposed Princess Vlei Parkway), although the significance of the impact may differ.

iv. Flora: Loss of Cape Flats Dune Thicket in the area north of Strandfontein Suburb

The proposed road would impact on the edge of an area indicated as 'bionetwork remnant vegetation' by the City (Refer to Figure 4.1 in Chapter 4). This route is located in an area indicated as a proposed route on the approved transport plan for the City (Refer to Figure 2.4 in Chapter 2).

11.2.2 Social – High Positive Significance (Table 11.1)

The following positive social impacts are anticipated should the proposed project be implemented:

i. Macroeconomic impact over the long term relevant to all sectors

The proposed road would have a positive effect on the GDP (R500m each year during the first three years of construction. By the end of the concession period, the contribution to GDP could be as high as R940m. The proposed project has the capacity to make a GDP of over R17 billion by the end of the contract period). In addition, it would create jobs during both the construction and operational phases. Furthermore, this project would contribute positively to the GGP (over R6 billion to provincial GGP by the end of the contract period). This translates into benefits for both the regional and national economies.

ii. Traffic volumes over the long term in Sector 5

It is expected that as traffic volumes increase over time on the existing road network and, in the absence of major increases in carrying capacity, more and more road users would find that sector 5 is relatively cheaper to use than the existing road network. Traffic volumes would increase in this sector as a result of voluntary consumer choices.

11.2.3 Biophysical – High Positive Significance (Table 11.2)

The following positive biophysical impacts are anticipated should the project be implemented.

i. Modification of subsurface seepage at CFWWTW by the proposed road

Of high positive significance is the modification of subsurface seepage at CFWWTW by the proposed road. It is recommended that a subsurface agricultural drain be installed between the CFWWTW and Zeekoevlei if the proposed road is constructed. Such a drain has been recommended in previous studies of Zeekoevlei to reduce the seepage of enriched water from the CFWWTW towards Zeekoevlei.

There would not be any impact on groundwater if this issue is not mitigated; therefore the proposed mitigation is not compulsory for the proponent. Should the proposed road however be approved, it would be strongly recommended that the proposed modification be implemented to benefit Zeekoevlei, and to compensate for some of the other negative effects elsewhere on the vlei.

11.2.4 Overall Impacts

Should the recommendations from the specialists' investigations be implemented throughout the proposed route, it is anticipated that the majority of the impacts identified would be brought to an acceptable level.

11.3. UNRESOLVED ISSUES

There are three unresolved issues which the environmental team have noted. These are:

11.3.1 The Proposed False Bay Ecology Park

The proposed route through the proposed FBEP remains an unresolved issue. Should the FBEP become a reality at some point in the future, there would be an impact on it by the significance.

Of these impacts, the loss of 'sense of place' could remain high significance even after mitigation measures are implemented. While it is noted through the assessment, that the future viability of the park may be impacted upon, it is difficult to quantify this impact in any way, as the park is only at the proposal stage. The environmental team have made recommendations for the co-existence of the proposed FBEP and the proposed road in this area that could lessen the potential negative impacts, and possibly enhance positive aspects. Nonetheless, there has been no firm resolution with the proponents of the FBEP in this regard.

It should however, be acknowledged that the proposed route through the proposed FBEP would remain on the transport plans for the City, in the event that the CCT require it as an option in the future.

It would appear in this circumstance, that a policy decision needs to be made regarding the co-existence of these two proposals. At this stage, the impacts have been identified and mitigation measures suggested in order for the two entities to exist together.

11.3.2 Impact Of Tolling On The Poorer Populations

There are certain sectors of the population that would be significantly affected by having to pay a daily toll rate. It should be noted that this category of potential users are impacted on in relation to the existing portion of the proposed road (the R300). Due to the urban nature of the ring road, users are given a choice of which route they could take.

The economic assessment noted that the overall impact of the proposed road is beneficial not only to individuals using the road, but to users of the entire network, and to the government at both a local and national level.

Although the economic assessment indicates that after mitigation (frequent user discounts), this impact, over the short-term, is considered to be of low significance, it remains emotionally significant. Given the urban nature of the proposed road, alternative routes would exist and no capture communities have been identified. The impact of tolling these commuters would need to be considered, and a decision taken by the Minister of Transport.

11.3.3 Tolling of Roads in the CMA and Western Cape Province

It should be noted that the CCT have yet to take a final decision on a policy regarding the use of tolling roads within the CMA (although Chapman's Peak is a toll road within the CMA). In addition, the imposition of a fuel levy is currently being investigated by the Western Cape Province.

11.3.4 Mitigation, Management and Monitoring

Due to the competitive nature of the tender process related to the final phases of the Unsolicited Proposal Process it is difficult to assure the implementation of the recommended mitigation measures in this report. It remains the responsibility of the implementing authority, i.e. SANRAL, to control the implementation of mitigation through the setting of terms and conditions in the tender process and the concession contract.

11.3.5 Government Issues

There are inadequacies in strategic level planning, implementation and decision making responsibilities. The most relevant include:

- The division of responsibilities between national, provincial and metropolitan environmental authorities in the approval of this project;
- The absence of a Cape Metropolitan-wide transport plan;
- The method of implementation of the Biodiversity Network strategy of the CCT's Integrated Metropolitan Environmental Policy (IMEP).

11.4. OVERALL CONCLUSIONS

Based on the specialist studies undertaken within this EIA, both benefits and negative impacts are anticipated as a result of the proposed project. The findings of this EIR have highlighted these impacts and prioritised them in terms of high, medium or low significance. While there are impacts of high significance that have been determined, these need to be seen in balance with the assessed socio-economic benefits. The authorities need to use this document to aid the decision-making process with respect to the future outcome of this proposal.