2. DESCRIPTION OF THE PROPOSED PROJECT

The proposal for the N2 Wild Coast Toll Road project is to design, construct, finance, operate and maintain this new limited-access toll road facility for a 30 year concession period, as per the Concession Contract. This road project is proposed to extend over a total distance of approximately 550 km from the Gonubie Interchange, near East London (Eastern Cape) to the Isipingo Interchange south of Durban (KwaZulu-Natal).

The key components of the proposed project include:

- the upgrading of existing road sections (of the N2 and R61) included within the project;
- new road construction within an identified greenfields corridor;
- the upgrading and/or construction of new road interchanges and intersections; and
- the construction of associated structures (such as toll plazas and bridges).

This proposed project aims to provide a limited-access, high-speed national route, which optimises road-user safety through:

- the upgrading and/or construction of the proposed route to a design speed of 100 – 120 km/h for the majority of its length, with the speed decreasing to 60 km/h in limited sections only;
- the provision of a dual-carriageway road and/or climbing lanes where required in order to maintain travel speed and adequate service levels;
- the implementation and maintenance of appropriate fencing of the road reserve along the entire length of the route (in terms of the Concession Contract requirements);
- the consolidation and formalisation of accesses onto the proposed toll road in order to ensure road-user safety (in terms of sight distances and provision of traffic turning lanes);
- the eradication of illegal access along the proposed route;
- the rehabilitation and overall improvement of the road surface along existing sections of the route (e.g. skid resistance);
- the implementation and maintenance of appropriate road signage, road furniture and roadside emergency facilities; and
- the provision of a well-maintained shoulder along the length of the proposed route.

A detailed description of the proposed project along the length of the route is provided in the sections below.
2.1. Proposed Route Alignment

The proposed alignment of the N2 Wild Coast Toll Road has been determined over a period of more than 20 years. The determination of a preferred alignment has, over time, taken cognisance of aspects considered to be limiting constraints to both the environment (biophysical and social) and the project (e.g. economics, technical feasibility, etc).

The proposed route alignment will connect major centres, including East London, Butterworth, Idutywa, Umtata, Ndwalane, Lusikisiki, Port Edward, Port Shepstone and Durban, and will be an approximate 85 km shorter than the existing N2 via Mount Frere, Kokstad and Harding. Approximately 80% of this proposed route utilises existing road alignments (i.e. sections of the existing N2 and R61 routes). This will affect the following sections of road:

- East London to Umtata – utilising the existing N2 alignment
- Umtata to Ndwalane – utilising the existing R61 alignment
- Ntafufu River to Lusikisiki – utilising the existing R61 alignment
- Mtamvuna River to Southbroom – utilising the existing R61 alignment
- Southbroom to Hibberdene – utilising the existing N2 Oribi Toll Road
- Hibberdene to Durban – utilising the existing N2 alignment

The greenfields corridor extends between Ndwalane and Ntafufu River, and Lusikisiki and Mtamvuna River, and has been identified as a preferred corridor from environmental, technical, social and economic perspectives. Within this greenfields corridor, a preferred alignment (refer to Figure 2.1 overleaf) has been identified through pragmatic interfacing between the environmental team and the technical design team, and focussing on the synergy between the two processes. A number of alternatives were identified and investigated at areas of environmental sensitivity identified within the greenfields corridor during the ESS. These are discussed in Chapters 9 and 11 of this report.
Figure 2.1: The proposed N2 Wild Coast Toll Road between the Gonubie Interchange (Eastern Cape) and the Isipingo Interchange (KwaZulu-Natal), showing the preferred alignment within the greenfields corridor between Ndwalane and the Mtamvuna River.
2.2. **Brief Description of the Affected Environment**

The proposed route alignment between East London (in the Eastern Cape) and Durban (in KwaZulu-Natal) is particularly diverse and varied, mainly due to the range of geological formations and complex topography it traverses. The route passes through regions of different histories and land use patterns, and is also varied in terms of the social environment associated with the areas through which it passes, ranging from larger towns (e.g. East London and Umtata) in the south, through rural and subsistence communities in the former-Transkei, to formal and urbanised communities characteristic of the South Coast of KwaZulu-Natal, ending in the industrial and urban centre of Durban South.

From East London, the route follows an inland alignment along an undulating plateau to Umtata. This section of the route is bisected by several river systems, and is characterised by the Kei Cuttings in the vicinity of the Great Kei River. The key communities located along this section of the proposed route include the urban communities of larger towns such as East London and Umtata, the peri-urban communities of the larger secondary and regional towns such as Butterworth, and the rural communities of towns such as Komga and Idutywa. The route then traverses the dissected landform characteristic of the area between Umtata and Ndwalane (approximately 10 km west of Port St Johns on the coast). Many small rural villages, reliant on subsistence farming, straddle the existing R61. At Ndwalane, a new route alignment is proposed inland of the Port St Johns area. This route provides a new route via Ntafufu to Lusikisiki. A second greenfields section is proposed to extend from the end of the concrete road in the vicinity of Lusikisiki to the Mtamvuna River on the Eastern Cape-KwaZulu-Natal border.

The larger part of this greenfields section of the road follows the inner-most (inland) boundary of the Msikaba Formation, lying inland of the small escarpment parallel to the coastline, in the vicinity of the Msikaba River. The significance of the geology in this area is the distribution of plants in this region, as the endemic plants characteristic of the Pondoland Centre are confined to the Msikaba Formation. The area is characterised by a more undulating landscape (albeit dissected by deep river gorges), the occurrence of rocky outcrops and soils of low agricultural potential (typically suitable only for grazing or wilderness by virtue of the steep slopes and shallow stony soils). The only large tracts of arable soil occur north-east of the Msikaba River mainly between the Msikaba and Mtentu Rivers in the Tracor lands, as well as between the Mtentu and Mnyameni rivers. Within these areas, communities have settled in areas which are suitable for cultivation, and comprise the “subsistence” rural villages and scattered communities typical of the Eastern Cape (refer to Photograph 2.1).
below). Those areas of low agricultural potential are characterised by sandy, highly leached, acidic and relatively shallow soils, in which the endemic plants characteristic of the Pondoland Centre (PC) occur.

**Photograph 2.1:** Communities have settled in areas which are suitable for cultivation, and comprise the “subsistence” rural villages and scattered communities typical of the Eastern Cape

The majority of the route within the Eastern Cape Province is on an inland alignment (i.e. between 10 -15 km from the coastline), with the route gradually descending down from the Mtentu River to join the existing N2 at the Mtamvuna River. From the Mtamvuna River to the Isipingo Interchange, the proposed route utilises existing road sections (i.e. the R61 and the N2).

Due to the physical extent of the project (i.e. 550 km in length), the affected environment is multi-faceted, and a balance between the impacts and/or benefits on the social and biophysical environments is required to be sought in order to assess the sustainability of the project.
2.3. Proposed Construction Activities

2.3.1. Pavement (road) Construction

Portions of the existing road sections of the N2 and R61 that have been included as part of the project are considered to currently be in a condition which is below National Road standards (in terms of the South African Road Safety Manual, 1999). These sections, therefore, require maintenance and/or upgrading in order to adhere to stipulated safety criteria. Some issues of concern on these particular routes include:

- the need for new and upgraded infrastructure, intersections and interchanges to accommodate future traffic growth;
- traffic congestion on a daily basis on certain sections;
- poor road-user and pedestrian safety;
- occurrence of distressed road pavements and lack of maintenance; and
- control of informal road accesses.

Therefore, preliminary investigations for the length of the route have identified the need for the following general construction activities:

- the construction of new highway sections where no existing infrastructure exists;
- the repair of existing road surfaces where conditions are unsafe (e.g. where potholes have developed);
- the addition of a lane in each direction where traffic congestion is known to be a problem;
- the addition of “climbing” lanes for short distances up steep grades to allow faster vehicles passing opportunities;
- the upgrading of intersections, interchanges and turning lanes where road-user and community safety is currently a concern; and
- the installation of roadside SOS emergency facilities.

The following rehabilitation and construction activities are proposed for the existing and new road sections included in the N2 Wild Coast Toll Road project:
• **Gonubie Interchange to Great Kei River (existing N2)**

The existing N2 is generally in a poor to fair condition, and requires rehabilitation and upgrade in order to maintain the required national road standard. This section of existing road (approximately 58 km in length) will be rehabilitated and upgraded, where required (e.g. the addition of “climbing” lanes for short distances up steep grades to allow faster vehicles passing opportunities, the repair of existing road surfaces where conditions are unsafe, and improvements to intersections and interchanges at various points along the route) to improve sight distance and road-user safety. All initial construction works along this section of the route will be undertaken within the existing road reserve, except at the proposed Komga Interchange.

• **Great Kei River to Ngobozi (existing N2)**

This section of the route via the Kei Cuttings (approximately 16 km in length) has been recently reconstructed. The need for additional safety improvements will be investigated, where necessary. All initial construction works along this section of the route will generally be undertaken within the existing road reserve.

• **Ngobozi to Umtata (existing N2)**

This section of the existing N2 (approximately 130 km in length) is generally in a poor to fair condition, and requires rehabilitation and upgrade in order to maintain the required national road standard. The existing two-lane road has sections of sub-standard horizontal and vertical alignment which will be investigated for upgrading in order to improve road-user safety (e.g. the addition of “climbing” lanes for short distances up steep grades to allow faster vehicles passing opportunities, the repair of existing road surfaces where conditions are unsafe, and improvements to intersections and interchanges at various access points along the route). In addition, safety improvements are required for pedestrians. All initial construction works along this section of the route will be undertaken within the existing road reserve, except at the proposed interchanges.

The existing road between Ndabakazi and Butterworth, Butterworth and the Msobomvu intersection, and Viedgesville and the Umtata central business district (CBD) will be upgraded to a four-lane undivided road during the 30-year concession period.

The possibility of constructing ring roads (bypasses) at Butterworth and Idutywa during the 30-year concession period will be investigated, but is not part of the initial construction works (i.e. to be constructed within the first 3 – 5 years of the concession period).
period). Until these ring roads are constructed, the concessionaire will be responsible for the maintenance and safety of the road through the town which is to form part of the N2 Wild Coast Toll Road project.

- **Umtata to Ndwalane (existing R61)**
  This section of approximately 80 km traverses rugged and geotechnically unstable terrain. This existing road will require repair, widening of the road surface, and upgrading in places (e.g. widening the road, the addition of “climbing” lanes, the repair of existing road surfaces where conditions are unsafe, and improvements to intersections and interchanges at various points along the route) for improved road-user safety and riding quality. All initial construction works along this section of the route will be undertaken within the existing road reserve, except at the proposed interchanges and between Umtata and Ngqeleni turnoff.

  The construction of a ring road (bypass) on the south eastern side of the town of Umtata during the concession period will be investigated, but is not part of the initial construction works. Until this ring road is constructed, the concessionaire will be responsible for the maintenance and safety of the road through the town which is to form part of the N2 Wild Coast Toll Road project.

  The section of the route between the Umtata CBD and the Ngqeleni Intersection (approximately 6 km in length) will be upgraded to a four-lane, dual carriageway road. After the Ngqeleni Intersection, the R61 via the Tutor Ndamase Pass is in a poor to fair condition.

- **Ndwalane to Ntafufu River (new road)**
  This section of approximately 16.5 km will require the construction of a section of new road to national road standards. This new road is to provide a more direct route for N2 through-traffic, as well as an improved design speed in comparison with the existing R61 between these two points.

- **Ntafufu River to Lusikisiki (existing R61)**
  This section of approximately 18 km will be upgraded and rehabilitated to improve the design speed and safety of this section. Where necessary and feasible, “climbing” lanes will be added and the road cross-section widened. All initial construction works along this section of the route will generally be undertaken within the existing road reserve.
• **Lusikisiki to Mtamvuna River (new road)**
  The approximate 6.5 km section of concrete road to the east of Lusikisiki (up to the Magwa intersection) will be upgraded to a dual carriageway. From the Magwa Intersection, the remaining section of approximately 71 km will require the construction of a new section of road to national road standards. The new road will require the crossing of the Msikaba, Mtentu, Mnyameni, Mpahlane and Mzamba river gorges, as well as undulating high-lying areas between these major river valleys. The proposed route joins with the R61 approximately 2 km south of the Mtamvuna River, in the vicinity of the Wild Coast Sun Casino. This short section of the R61 will be rehabilitated and/or improved, as required.

• **Mtamvuna River to Southbroom Interchange (existing R61)**
  This section of approximately 22 km is considered to currently be in a fair condition. However, this section of road is characterised by frequent access points which currently serve a number of coastal resorts and the more rural areas of KwaZulu-Natal. It is envisaged that pavement rehabilitation measures will be required, together with upgrading (e.g. the addition of “climbing” lanes, the repair of existing road surfaces where conditions are unsafe, and improvements to intersections and the provision of interchange(s) at various places along the route) to optimise road-user safety. All initial construction works along this section of the route will generally be undertaken within the existing road reserve.

• **Southbroom to Winklespruit (existing N2)**
  This section of approximately 109 km is proposed to utilise the existing government operated South Coast Toll Road. This existing road is considered to currently be in a fair condition. It is envisaged that rehabilitation and upgrading of the road surface will be undertaken, where necessary. All initial construction works along this section of the route will generally be undertaken within the existing road reserve.

• **Winklespruit to Isipingo Interchange (existing N2)**
  This section of approximately 15 km is proposed to utilise the existing N2 south coast road. This section of the existing N2 will be rehabilitated and upgraded, and will include the addition of a lane in both directions between Amanzimtoti and the Isipingo Interchange to alleviate current and anticipated future traffic congestion, as well as access improvements at some points within the section. All initial construction works
along this section of the route will generally be undertaken within the existing road reserve.

2.3.2. Bridge Crossings

Major bridge crossings are required at five deeply incised gorges, namely the Msikaba, Mtentu, Mnyameni, Mpahlane and Mzamba Rivers. Issues of concern regarding these crossings include:

- the rugged nature of the local topography;
- the sensitivity of the natural environment to disturbance, including the riparian vegetation, river banks and watercourses;
- distance between river gorge banks between which the bridges are to be constructed;
- technical feasibility of the crossing points and overall bridge design; and
- financial constraints.

Due to the rugged topography and the constraints this terrain presents, as well as the potentially ecologically sensitive systems associated with these river systems, technically feasible crossings of these rivers were identified and assessed. These crossings are considered in detail in Chapter 11.

2.3.3. Ring Roads

Butterworth, Idutywa and Umtata were earmarked for the possible construction of ring roads to avoid the need for the national road to pass through the built-up areas and towns. In terms of the high standards expected by road-users along the toll road, passing through these towns is not considered desirable in the long-term as it would require the reduction in speed due to traffic within the centre of towns and large numbers of pedestrians.

- **Umtata Ring Road:**
  This ring road would potentially follow the existing road reserve identified by the Umtata Municipality, which joins the R61 east of Umtata near the Corana River bridge.

- **Butterworth Ring Road:**
  This ring road is proposed to commence approximately 3,5 km south of Butterworth, bypass the town, and rejoin the existing N2 approximately 11,8 km north of Butterworth.
• **Idutywa Ring Road:**

  The ring road is proposed to commence approximately 1.1 km south of Idutywa, pass east of the town, and rejoin the existing N2 approximately 1.6 km north of Idutywa.

From responses received during the Environmental Scoping Phase of the project, the construction of these ring roads will not form part of the initial construction works, and are therefore not assessed within this EIA. Should these ring roads be planned to be constructed in the future when the level of service required necessitates their construction, these will be required to be assessed at this time.

### 2.3.4. Interchanges, Intersections and Accesses

Several grade separated interchanges are proposed to be constructed along the route. These include, *inter alia*:

- Komga – King Williamstown intersection;
- Ndabakazi intersection;
- Ngqeleni intersection; and
- Port Edward Intersection.

The need for further interchanges may arise, and these will be investigated and subsequently constructed during the concession period when the level of service required necessitates their construction. These are not included in the initial construction works.

District road intersections are to be upgraded along the entire route in order to improve overall road safety. The provision of turning lanes will facilitate through-traffic flow, and improve road-user safety.

Village and informal accesses are to be improved, consolidated and formalised, with a minimum spacing of approximately 1 km between these intersections. Fencing, cattle grids, underpasses, overpasses, sidewalks and frontage roads will be constructed, where required, in order to improve safety and provide grade separated facilities across the route.
2.3.5. Toll Plazas

Economic and technical feasibility studies have been undertaken to determine the number and most appropriate locations of toll plazas. Toll tariff details are not available during this planning stage of the project. The planned location of the seven mainline toll plazas are as follows (refer to Figure 2.2):

- in the area of the Kei River crossing, just outside Ngobozi, referred to as Ngobozi Plaza;
- the Bashee Bridge region, close to the Candu River, referred to as Candu Plaza;
- in the vicinity of Ntlaza Mission, near the Tutor Ndamase Pass, referred to as the Tutor Ndamase Plaza;
- between Lusikisiki and Mtamvuna, north of the Mtentu river crossing, referred to as Mtentu Plaza;
- the existing Oribi toll plazas between Izotsha and Umtentweni;
- in the Park Rynie area, just north of the interchange, referred to as Park Rynie Plaza; and
- between the Moss Kolnick and Isipingo interchanges, referred to as Isipingo Plaza.

Ramp plazas are planned as follows:

- the existing Izotsha ramp plazas on the southern ramps of the Shelly Beach Interchange;
- the existing Oribi ramp plazas on the northern and southern ramps of the Marburg Interchange;
- the existing Umtentweni ramp plazas on the northern ramps of the Umtentweni Interchange;
- the southern ramps of the Sezela Interchange;
- the southern ramps of the Park Rynie Interchange;
- the northern ramps of the Scotthurgh Interchange;
- The southern ramps of the Adams Road Interchange;
- The southern ramps of the Moss Kolnick Interchange; and
- The southern ramps of the Joyner Road Interchange.

All toll plaza positions are provisional within the proposed areas at this point in time and will be finalised through the results of this EIA process and the Intent-to-Toll process.

The principle of tolling, including the viability of operating the route as a toll road in order to finance the project, will be addressed in terms of the South African National Roads Agency
Limited and National Roads Act (No 7 of 1998). Further opportunity for input on tolling will be provided to the public by SANRAL under this legislation within their Intent-to-Toll Process, which is to be held at a later date (refer to Appendix A).

- **Technical Factors Considered in the Determination of Toll Plaza Positions**

  The toll plaza positions are critical to the financial viability of the project. The location of toll plazas is also dependent on a number of other factors, including:

  - Locations must be such that adequate sight distance in both directions exists at the mainline plaza. Plazas should preferably be located on straight sections of roads, with a sight distance of 300 m in both directions.
  - Positioning of a mainline plaza on a steep gradient is to be avoided as this creates problems for heavy vehicles in particular (i.e. downhill stopping and pulling off uphill from the plaza), and exacerbates impacts associated with noise and safety.
  - As far as possible, locations should not be directly adjacent to settlements or homesteads, in order to avoid unnecessary impacts in terms of noise, lighting, etc.
  - As far as possible, access to power, water and telephone services, as well as suitable proximity to towns providing other important services (employee accommodation, bank, post office, etc.) should be sought.
  - Sufficient area must be available adjacent to the road side for widening of the road at the mainline plaza, and for accommodation of a control building which monitors the activities at the toll plaza.
  - Favourable ground conditions pertaining to foundation bearing capacity and subsoil drainage are required.
  - Ease of construction of a temporary road deviation at plaza sites on existing roads, while plaza construction takes place.

  All of the above criteria were used together with financial factors in defining the most equitable toll strategy capable of realising the revenue required to cover the project costs.

**2.3.6. Summary**

A summary of the proposed construction activities per a detailed division of road sections is provided in Table 2.1. This table provides information in terms of current problems associated with the project road sections, as well as proposed benefits and new design speeds which will be achieved.
Figure 2.2: Proposed areas for the location of toll plazas along the N2 Wild Coast Toll Road route
Table 2.1: Summary of proposed construction activities per road section along the proposed N2 Wild Coast Toll Road route

<table>
<thead>
<tr>
<th>Road Section</th>
<th>Distance (km)</th>
<th>Description</th>
<th>Proposed Construction Activity</th>
<th>Benefits</th>
<th>Current Problems</th>
<th>Design Speed (km/hr)</th>
<th>Work last undertaken</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gonubie Interchange – Mooiplaas</td>
<td>31,0</td>
<td>Existing N2</td>
<td>• Rehabilitation, where required.</td>
<td>• Improved riding quality.</td>
<td>• Slight “fattening up” in outer wheel paths of climbing lanes in places.</td>
<td>90 - 100</td>
<td>Original construction in 1961/1966, freeway section constructed in 1975. Resealed in 1990.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Resealing.</td>
<td>• Improved road-user safety.</td>
<td>• Limited rutting in some areas.</td>
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<td></td>
<td></td>
<td></td>
<td>• Upgrading of intersections, where required.</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>• Repairing of structures, as required.</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>• Replacement of guard rails, signage and fencing, where required.</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>• Improved riding quality.</td>
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<td></td>
<td></td>
<td></td>
<td>• Improved road-user safety.</td>
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<tr>
<td>Mooiplaas - Komga</td>
<td>20,4</td>
<td>Existing N2</td>
<td>• Rehabilitation.</td>
<td>• Improved riding quality.</td>
<td>• Road surface extensively deformed with frequent pothole/patching repairs.</td>
<td>90 - 100</td>
<td>Original construction in 1961/1963. Resealed in 1990.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Widening to make provision for climbing lanes, where required.</td>
<td>• Improved road-user safety.</td>
<td>• Repairs not in good condition.</td>
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</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Repairing of structures, as required.</td>
<td></td>
<td>• Extensive rutting and cracking in shoulders.</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>• Replacement of guard rails, signage and fencing, where required.</td>
<td></td>
<td>• No climbing lanes.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Road Section</td>
<td>Distance (km)</td>
<td>Description</td>
<td>Proposed Construction Activity</td>
<td>Benefits</td>
<td>Current Problems</td>
<td>Design Speed (km/hr)</td>
<td>Work last undertaken (year)</td>
</tr>
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<td>-------------------------------</td>
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</tbody>
</table>
| Komga – Great Kei River       | 10,5          | Existing N2  | • Resealing.  
• Upgrading of intersections, where required.  
• Construction of Komga Interchange.  
• Repairing of structures, as required. | • Improved riding quality.  
• Improved road-user safety. | • Limited rutting and cracking in some areas.                                                                 | 60 - 80              | Original construction in 1980. Resealed in 1990. |
| Great Kei River - Ngobozi     | 16,0          | Existing N2  | • Improve safety features, particularly in Kei Cuttings section.  
| Ngobozi - Butterworth        | 18,2          | Existing N2  | • Rehabilitation, of whole section  
• Upgrading of the Ndabakaze Intersection.  
• Upgrade of section between Ndabakaze and Butterworth to 4-lane undivided road.  
• Provision of pedestrian walkways and guard rails, where required. | • Improved riding quality.  
• Improved road-user safety. | • Pedestrian traffic poses a safety risk in some areas due to proximity of rural settlements.  
• Conditions at Ndabakaze Intersection are very dangerous due to turning traffic and pedestrians. | 70 - 100             | Original construction in 1950 – 1952. Resealed in 1981 & 1995.  
Being rehabilitated 2002/2003 |
<table>
<thead>
<tr>
<th>Road Section</th>
<th>Distance (km)</th>
<th>Description</th>
<th>Proposed Construction Activity</th>
<th>Benefits</th>
<th>Current Problems</th>
<th>Design Speed (km/hr)</th>
<th>Work last undertaken</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main street through Butterworth</td>
<td>1.4</td>
<td>Existing N2</td>
<td>• Replacement of guard rails, signage and fencing, where required.</td>
<td>• Improved travel time.</td>
<td>• Road markings very indistinct.</td>
<td>60</td>
<td>Originally rehabilitated &amp; widened in 1981. Resealed in 1993. Overlay in 2002/2003.</td>
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<td></td>
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<td></td>
<td>• Upgrade of through-road to support traffic (in terms of road safety, provision of lighting, etc).</td>
<td>• Improved road-user safety.</td>
<td>• Large numbers of vehicles executing turns at intersections.</td>
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<td></td>
<td>• Improved safety for communities, pedestrians and road-users in town.</td>
<td>• Large numbers of pedestrians in the town centre.</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>• Resealing</td>
<td>• Improved road-user safety.</td>
<td>• Fencing and signage poor.</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>• Upgrading of intersections, incl. widening of road where required.</td>
<td></td>
<td>• Pedestrian traffic poses a safety risk in some areas due to proximity of rural settlements.</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>• Upgrade of section between Butterworth and Msobomvu Intersection to a 4-lane undivided road</td>
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<td>• Replacement of guard rails, signage and fencing, where required.</td>
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<td></td>
<td>• Repairing of structures, as required.</td>
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<td>• Improved riding quality.</td>
<td>• Improved road-user safety.</td>
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<td></td>
<td>• Improved travel time.</td>
<td>• Improved safety for communities, pedestrians and road-users in town.</td>
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<td></td>
<td>• Large numbers of vehicles executing turns at intersections.</td>
<td>• Large numbers of pedestrians in the town centre.</td>
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<td></td>
<td>• Large numbers of pedestrians in the town centre.</td>
<td>• Road markings very indistinct.</td>
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<td></td>
<td>• Large numbers of pedestrians in the town centre.</td>
<td>• Improved travel time.</td>
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<tr>
<td>Main street through Idutywa Municipal Area</td>
<td>1.2</td>
<td>Existing N2</td>
<td>• Upgrade of through-road to support traffic (in terms of road safety, provision of lighting, etc).</td>
<td>• Improved travel time.</td>
<td>• Improved road-user safety.</td>
<td>60</td>
<td>Original construction in 1948-1950. Reconstructed in 1990 – 1992. Portion of main street re-aligned through Rein Street.</td>
</tr>
<tr>
<td></td>
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<td>• Improved travel time.</td>
<td>• Improved road-user safety.</td>
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<td></td>
<td>• Improved road-user safety.</td>
<td>• Improved safety for communities, pedestrians and road-users in town.</td>
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<td>• Improved safety for communities, pedestrians and road-users in town.</td>
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<td>• Improved safety for communities, pedestrians and road-users in town.</td>
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<td>• Repairing of structures, as required.</td>
<td>• Large numbers of vehicles executing turns at intersections.</td>
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<td></td>
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<td></td>
<td>• Provision of pedestrian walkways and guard rails, where required.</td>
<td>• Large numbers of pedestrians in the town centre.</td>
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<td></td>
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<td></td>
<td>• Guard rails, fencing and signage not in good condition.</td>
<td>• Improved travel time.</td>
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<td></td>
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<td>• Improved riding quality.</td>
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<td>• Improved riding quality.</td>
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<td></td>
<td></td>
<td></td>
<td>• Resurfacing.</td>
<td>• Improved road-user safety.</td>
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<td></td>
<td></td>
<td></td>
<td>• Widening, where required.</td>
<td>• Improved road-user safety.</td>
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<td>• Replacement of guard rails, signage and fencing, where required.</td>
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</table>

Description of the Proposed Project
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<tr>
<th>Road Section</th>
<th>Distance (km)</th>
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<th>Current Problems</th>
<th>Design Speed (km/hr)</th>
<th>Work last undertaken (year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Candu River - Viedgesville</td>
<td>38,5</td>
<td>Existing N2</td>
<td>• Resealing/rehabilitation.</td>
<td>• Improved road-user safety.</td>
<td>• Road surface is extensively deformed with frequent potholes/patching repairs.  • Extremely dangerous shoulder erosion occurs in some areas.  • Skid resistance generally low.  • Several illegal accesses near Viedgesville.  • Dangerous due to turning vehicles and pedestrians.  • Riding quality poor to very poor.</td>
<td>120 (80 at Viedgesville)</td>
<td>Original construction in 1948 – 1950.  Widened and re-constructed in 1978 – 1980.  Mtentu cuttings resealed 2001</td>
</tr>
<tr>
<td>Viedgesville - Umtata</td>
<td>12,9</td>
<td>Existing N2</td>
<td>• Rehabilitation.  • Widening to make provision for climbing lanes, and four lane undivided where required.  • Upgrading of intersections, where</td>
<td>• Improved road-user safety.  • Improved riding quality.</td>
<td>• Surface is extensively deformed with widespread cracking over entire length and width.  • Extremely unsafe</td>
<td>80 - 120</td>
<td>Original construction in 1948 – 1949.  Widened and re-constructed in 1975.</td>
</tr>
<tr>
<td>Road Section</td>
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</tbody>
</table>
| Main street through Umtata    | 6.7           | Existing N2 | • Upgrade of through-road to support traffic (in terms of road safety, provision of lighting, etc).  
• Ultra City to Hospital section to be upgraded to dual carriageway  
• One way couplet for Madeira/Sprigg Streets  
|                               |               |             |                                | • Improved travel time.  
• Improved road-user safety.  
• Improved safety of communities, pedestrians and road-users in town.  
|                               |               |             |                                | • Road markings very indistinct.  
• Large numbers of vehicles executing turning movements at intersections.  
• Large numbers of pedestrians in the town centre.  
|                               |               |             |                                | • Section of the route near Umtata is characterised by peri-urban development along the road corridor, which requires the formalisation of access and cross-  
|                               |               |             |                                |                                                                         | 60                                                               | Original construction 1970’s. 1.5 km upgraded to dual carriageway in 1999 |
| Umtata - Libode               | 30            | Existing R61| • Resealing.  
• Upgrading of intersections, where required.  
• Construction of Ngqeleni Interchange.  
• Improvement of access control.  
• Widening of the Umtata  
|                               |               |             |                                | • Improved road-user safety.  
• Improved and controlled access.  
• Increased traffic capacity  
|                               |               |             |                                | • Section of the route near Umtata is characterised by peri-urban development along the road corridor, which requires the formalisation of access and cross-  
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<th>Work last undertaken (year)</th>
</tr>
</thead>
</table>
| Libode to Ntlaza  | 8,1           | Existing R61| • Widening and rehabilitation.  
• Upgrading of intersections, where required.  
• Climbing lanes, where required.  
• Provision of pedestrian and taxi facilities, where required. | • Improved riding quality.  
• Improved road-user safety. | • Road in very poor condition. | 70 – 100               | Original construction in 1982/1983. 3 km section rehabilitated in 2001 and remaining section ressealed. |
| Ntlaza – Mgwenyana| 15,7          | Existing R61| • Initial resal.  
• Widening and construction of climbing lanes, where required.  
• Upgrading of intersections, where required.  
• Implementation of slope stability measures, where | • Improved riding quality.  
• Improved road-user safety.  
• Effective erosion control. | • The route passes through an area of geotechnical instability in the mountain pass (Tutor Ndamase Pass). | 60 – 70 in steep sections. 80 – 100 in rolling sections. | Original construction in 1986/1987. |
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<tbody>
<tr>
<td>Mgwenyana - Tombo</td>
<td>16,2</td>
<td>Existing R61</td>
<td>• Surface rehabilitation and widening of section.</td>
<td>• Improved riding quality.</td>
<td>• Large surfacing failures and embankment settlements have occurred, which have been repaired.</td>
<td>70</td>
<td>Original construction in 1983 and 1986. Repair to fill failure in 2001.</td>
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<td></td>
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<td>• Addition of climbing lanes, where required.</td>
<td>• Improved road-user safety.</td>
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<td></td>
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<td></td>
<td>• Upgrading of intersections, where required.</td>
<td>• Effective erosion control.</td>
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<td></td>
<td></td>
<td></td>
<td>• Construction of retaining walls at unstable cuttings.</td>
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<td></td>
<td></td>
<td></td>
<td>• Implementation of slope stability measures, where required.</td>
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<td>required.</td>
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<tr>
<td>Tombo - Ndwalane</td>
<td>9,5</td>
<td>Existing R61</td>
<td>• Reseal.</td>
<td>• Improved road-user safety.</td>
<td>• Culvert failure near Ndwalane in 2001</td>
<td>70</td>
<td>Original construction in 1989/1990.</td>
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<td></td>
<td></td>
<td></td>
<td>• Widening, where required.</td>
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<td></td>
<td></td>
<td></td>
<td>• Bridge widening at Umgazi River.</td>
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<td></td>
<td></td>
<td>• Provision of pedestrian and taxi facilities, where required.</td>
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<td></td>
<td></td>
<td></td>
<td>• Upgrading of intersections, where required.</td>
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<td></td>
<td></td>
<td>• Implementation of slope stability measures, where required.</td>
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<tr>
<td>Ndwalane – Ntafufu River</td>
<td>16.5</td>
<td>New road section</td>
<td>• New road construction on a preferred alignment which bypasses the present Umzimvubu Pondoland Bridge.</td>
<td>• Improved travel time.</td>
<td>-</td>
<td>80 - 120</td>
<td>-</td>
</tr>
<tr>
<td>Ntafufu River - Lusikisi</td>
<td>18</td>
<td>Existing R61</td>
<td>• Upgrading to a minimum design speed of 60 km/hr, where required and widen section.</td>
<td>• Improved travel time.</td>
<td>• Design speed was reduced to 40 km/hr to minimise initial construction costs.</td>
<td>60 – 80</td>
<td>Original construction in 1993/1995</td>
</tr>
<tr>
<td>Lusikisi – Msikaba River</td>
<td>25</td>
<td>New road section</td>
<td>• Upgrade of concrete road (east of Lusikisi) to a dual carriageway. • Upgrade of Magwa Intersection. • Upgrade of a portion of the gravel road from Magwa Intersection. • New road construction on</td>
<td>• Improved travel time.</td>
<td>-</td>
<td>100 - 120</td>
<td>Concrete road Lusikisi to Magwa turnoff (6.7 km) (2001). DR 08024 regravelled to Msikaba Mouth (2000)</td>
</tr>
<tr>
<td>Road Section</td>
<td>Distance (km)</td>
<td>Description</td>
<td>Proposed Construction Activity</td>
<td>Benefits</td>
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</table>
| Msikaba River – Mtentu River       | 22            | New road section | - New road construction on a preferred alignment.  
- High level bridge crossing over Mtentu River. | - Improved travel time.  
- Improved road-user safety. | -                  | 120                  | -                  |
| Mtentu River – Mtamvuna River      | 33            | New road section | - New road construction on a preferred alignment to join R61 road 2 km from Mtamvuna River bridge.  
- Construction of high level bridge structures across the Mnyameni, Mphalane and Mzamba rivers.  
- Maintenance and rehabilitation of the existing Mtamvuna River bridge and widen 2 km of exiting R61. | - Improved travel time.  
- Improved road-user safety. | -                  | 120 and 80 (2 km of R61) | Last 2 km on R61 constructed 1989. |
| Mtamvuna River – Southbroom        | 22            | Existing R61  | - Rehabilitation of the existing pavement.  
- Upgrading of sub-standard intersections.  
- Construction of Port Edward Interchange.  
- Construction of additional | - Improved road-user safety.  
- Improved access control.  
- Improved travel time.  
- Characterised by frequent access points which currently serve a number of coastal resorts and the more rural areas of | -                  | 80-100               | Original construction in the early 1980s. |
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<tbody>
<tr>
<td>Southbroom – Marburg Interchange</td>
<td>22</td>
<td>Existing N20</td>
<td>• Rehabilitation of the existing pavement during the concession period.</td>
<td>• Improved road-user safety.</td>
<td>• Access via interchanges at a number of locations.</td>
<td>120</td>
<td>Original construction in early 1990s.</td>
</tr>
<tr>
<td>Marburg Interchange – St Faiths Interchange</td>
<td>6</td>
<td>Existing N2</td>
<td>• Rehabilitation of the existing pavement during the concession period.</td>
<td>• Improved road-user safety.</td>
<td>-</td>
<td>120</td>
<td>Original construction in early 1990s.</td>
</tr>
<tr>
<td>St Faiths Interchange – Umhlungwa Interchange (Hibberdene)</td>
<td>21</td>
<td>Existing N2</td>
<td>• None, since a new road has recently been constructed over this section.</td>
<td>-</td>
<td>-</td>
<td>120</td>
<td>Original construction in early 1990s.</td>
</tr>
<tr>
<td>Umhlungwa Interchange (Hibberdene) – Park Rynie Interchange</td>
<td>31,7</td>
<td>Existing N2</td>
<td>• Resurfacing.</td>
<td>• Improved road-user safety.</td>
<td>-</td>
<td>120</td>
<td>Original construction in mid-1970s to 1980s.</td>
</tr>
<tr>
<td>Park Rynie Interchange – Winklespruit Interchange</td>
<td>29,0</td>
<td>Existing N2</td>
<td>• Resurfacing.</td>
<td>• Improved road-user safety.</td>
<td>-</td>
<td>120</td>
<td>Original construction completed in 1987.</td>
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<tr>
<td>Road Section</td>
<td>Distance (km)</td>
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<tr>
<td>Winklespruit Interchange - Amanzimtoti</td>
<td>5.3</td>
<td>Existing N2</td>
<td>• Asphalt overlay. • Rehabilitation, where required.</td>
<td>• Improved road-user safety. • Improved riding quality.</td>
<td>-</td>
<td>120</td>
<td>Original construction in late 1970s.</td>
</tr>
<tr>
<td>Amanzimtoti – Athlone Park Interchange</td>
<td>5.3</td>
<td>Existing N2</td>
<td>• Rehabilitation of existing pavement. • Addition of a third lane in each direction. • Reconstruction of Adams Road interchange to improve the operational safety of the interchange.</td>
<td>• Improved road-user safety. • Improved riding quality. • Improved travel time and alleviation of traffic congestion. • Safer access at Adams Road Interchange.</td>
<td>• Substandard interchange at Adams Road. • Capacity problems during peak periods.</td>
<td>120</td>
<td>Original construction in late 1970s.</td>
</tr>
<tr>
<td>Athlone Park Interchange – Isipingo Interchange</td>
<td>5.2</td>
<td>Existing N2</td>
<td>• Rehabilitation of existing pavement. • Addition of a third lane in each direction. • Construction of mainline toll plaza.</td>
<td>• Improved road-user safety. • Improved travel time and alleviation of traffic congestion. • Improved riding quality.</td>
<td>• Capacity problems during peak periods.</td>
<td>120</td>
<td>Original construction in late 1970s.</td>
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</table>