

4. Transport Policies

4.1 Introduction

The following figure illustrates the structure of Chapter 4.

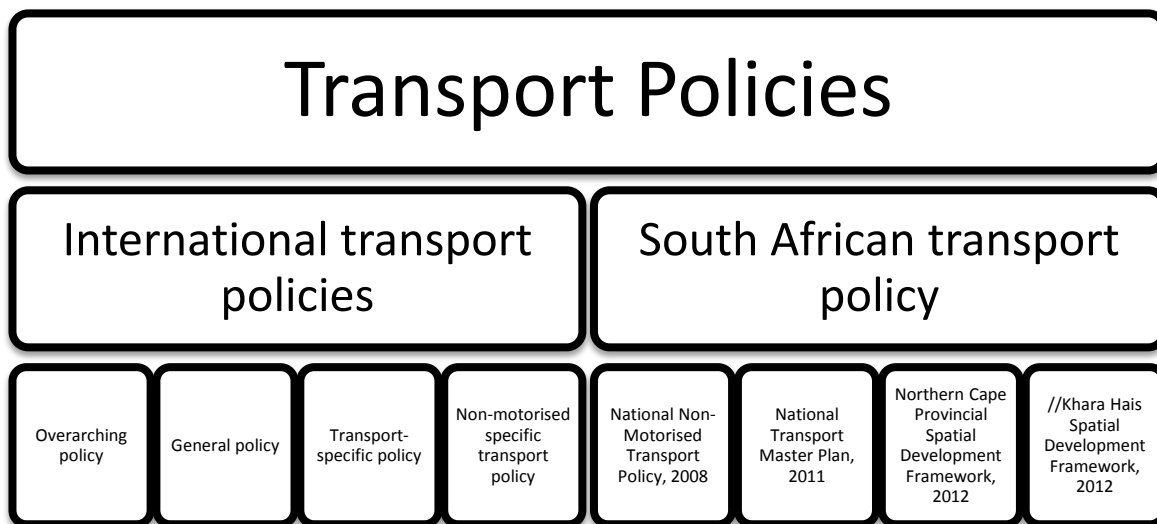


Figure 10: Chapter 4 layout

Source: Own construction (2013).

Numerous international and national (South African) policies exist pertaining to this subject. The emphasis of this research is, however, on policies guiding urban transportation, and more specifically on the subject, non-motorised transportation within urban areas.

The first policy scrutinised in this Chapter is that authorised by the UN, namely Share the road: Invest in Walking and Cycling Road Infrastructure (Dumitrescu & Kim, 2010). This was done in order to obtain a global viewpoint (the UN represents 193 developed and developing countries in total) on transportation development and the direction non-motorised developments were taking. The document is discussed to obtain an overview and not to gather detailed information.

The modus operandi followed, with regard to the international policies, was to obtain examples of this type of documentation. Non-motorised transportation strategies appeared in several types of documents; hence the discussion of general, transport-specific and non-motorised transport documents.

To obtain specific data for this research document, emphasis was placed on 1) understanding the strategic methods followed when these policies were compiled, 2) the end goal of these documents

(vision), 3) the modus operandi to reach these goals (mission) and 4) what kind of programmes were implemented to guarantee the mentioned goals (objectives).

The policies discussed were mostly linked to North American cities (USA and Canada). The reason for this was that the United States of America and Canada are developed countries with pro-active plans in place for managing private vehicles within their urban areas, as will be discussed. These are also world-leading countries/cities as both the New urbanism (Congress of the New Urbanism) and Smart growth (The Smart Growth Network) governing bodies are located in American cities; Chicago, Illinois (CNU, 2011) and Butte, Montana (Smart growth online, 2013) respectively.

The South African policies discussed relate to the specific town the study area is located in, namely Upington, Northern Cape Province. The only non-motorised transportation policy came in the form of a national policy; other policies consisting of information relating to transportation, representing all spheres of government, were also discussed to obtain a better understanding of specifically non-motorised transportation in South Africa. As mentioned in Chapter 1, Upington was chosen due to the known problems it had relating to transportation, transportation infrastructure and transportation facilities in the central business district of the town. The chapter concludes by comparing the international and national documentation and illustrating the similarities and elaborating on the shortcomings with regard to policies.

4.2. International policies

The specific international policies discussed in this chapter can be categorised into four groups.

- **Overarching policies** – The content of overarching international documentation is not transport specific but entails the agreement by more than one country to better the world. The relevant documentation will be dealt with and discussed.
- **General policies** – The content of this type of document discusses the broader future for a specific area in general. Examples are Spatial Development Frameworks (SDF), Smart growth developments and New urbanism developments. Sections of these plans will be relevant to transportation, transportation development and non-motorised developments.
- **Transport policies** – This type of document can be transportation plans relevant to any sphere of government.
- **Non-motorised transport policies** – These policies concentrate specifically on the development of non-motorised transportation.

Each of the above will subsequently be discussed.

4.2.1. Overarching international policy

One of the biggest role players in the world regarding the compilation of overarching international policies is the United Nations (UN) with its 193 members (United Nations, 2011). The UN identified three) main viewpoints/reasons for the instigation of non-motorised transport modes and infrastructure. These can be summarised as follows (United Nations Environment Programme, 2011):

- **Avoid** – The impact from engines such as the emission of greenhouse gases, carbon dioxide and black carbon can be avoided.
- **Shift** – Encourage the shift from private vehicles to public transport and non-motorised transportation (NMT), especially where there is heavy congestion. Also to prevent the shift from public transport and NMT to the private vehicles as income levels rise.
- **Share the Road** – Share the road is an initiative that advocates a systematic inclusion of MNT infrastructure in urban road investment as a matter of policy. This combines the agendas for mitigating climate change, improving road safety and increasing accessibility.

Share the road: Invest in Walking and Cycling Road Infrastructure (2010) is a global publication by the UN to demonstrate the benefits of investing in NMT. “Cities are in urgent need of a new paradigm for envisioning and implementing sustainable transport. While current road transportation systems have served as an engine of tremendous economic growth, they have also incurred huge costs in air pollution, emissions of greenhouse gases, injuries and fatalities from road crashes, lost productivity from congestion and, in some cases, the severance of communities. Such problems will be further exacerbated with the projected growth in private light-duty vehicles, namely a tripling of the global fleet by 2050, unless we establish cleaner, safer and more efficient transport systems.” (Dumitrescu, & Kim, 2010: 6.)

This document emphasises the following ten core recommendations to the international community, in particular to donors and governments for promoting increased investments in walking and cycling infrastructure (Dumitrescu, & Kim, 2010: 6-7):

- Recognise the benefits of a clean environment, safer roads and better mobility from increased investments in NMT infrastructure.
- Balance the share of NMT investments better in road and transport infrastructure projects to meet the full range of people’s mobility needs.
- Increase the amount of investments in NMT infrastructure as part of efforts to make our economies more sustainable, improve global road safety and achieve the Millennium

Development Goals for reducing poverty (Goal 1 according to the United Nations' website (United Nations, 2013).

- Collaboration across a wide range of sectors and countries to make investment in NMT infrastructure a matter of policy in donor agencies and government budgets.
- Promote education and training for specialists to enable them to plan adequate transport systems.
- Have creativity and courage for charting a sustainable mobility path.
- Design roads so that vulnerable road users (pedestrians and cyclists) are protected from high-speed impact (vehicles).
- Integrate NMT networks with other modes, especially public transport, in order to maximise mobility (The maximum comfortable reach for walking and cycling is 3 km and 15 km respectively).
- Develop indicators that can monitor and evaluate roads for their contribution to sustainable development in terms of environment, safety and accessibility.
- Liaise with governments at all levels to identify best practices.

4.2.2. General international policies relevant to transport planning

An example of transportation policies within general policies is the Mount Rainier (Maryland State, United States of America) town centre urban renewal plan. This plan was part of a range of programs to revitalise the city centre. In November 2000 the City formally requested that the Maryland Department of Planning (MDP) help the city create an Urban Renewal Plan (City of Mount Rainier, 2005: 1).

As part of the vision for the city the following was compiled: "... the town centre will project a comfortable and safe environment, suitable for walking, bicycling, taking transit, or driving." (City of Mount Rainier, 2005:1). Mobility is categorised as principle 4 within the document and subdivided into 4 objectives, each with its relevant recommended strategies. The objectives are:

- Provide a safe, convenient, and accessible circulation network for walking to and through the town centre.
- Encourage and facilitate bike riding as an easy and efficient alternative to the private vehicle.
- Increase the use of public transit as a means of reducing congestion and parking demand.
- Provide for parking needs of businesses and residents (City of Mount Rainier, 2005: 18-19).

With regard to transportation, a plan that corresponds with the above-mentioned Town Centre Urban Renewal Plan of Mount Rainier is that of the city Waldport, Oregon. A core function of the

Urban Renewal Plan#2 (2005) is Goal C: Improve Streets, Sidewalks and Circulation System (City of Waldport, 2005:5). To improve the safety of the residents within the earmarked area the council decided to build new sidewalks and streets that would promote the use and safety of non-motorised vehicles, especially that of cyclists and pedestrians (City of Waldport, 2005:7).

It is clear from the plans evaluated above that transportation infrastructure and different transportation modes are core functions in general city plans.

4.2.3. International transport-specific policy

Ottawa's Transport Master Plan (2008) is an example of a city (Ontario, Canada) of a developed country realising the challenges today and planning for the future (City of Ottawa, 2008a:7). This plan was compiled to give direction to the city for the 2 decades following from 2011. It was also the follow-up Transport Master Plan for the 2003 version and forms part of the Ottawa Growth Management Strategy (City of Ottawa, 2008a:7).

The comprehensive plan accepted the Growth Management Principles as identified by residents through city documents and added an indication of how the Transportation Master Plan (2008) will promote the principles. The table below summarises the growth management principles and direction of the Transport Master Plan.

Table 13: Growth management principles and transportation master plan

Growth Management Principles	Transportation Master Plan Directions
A caring and inclusive city providing public services in a way that responds to cultural needs and diversity while assisting social integration.	• Ensure access to transportation options for all residents. • Provide services for walking, cycling and transit. • Improve road safety.
A creative city rich in heritage and unique in identity.	• Supporting a vibrant downtown by preserving multi-modal access, with a focus on walking, cycling and transit. • Acknowledge the different transportation needs of urban areas.
A green and environmentally sensitive city.	• Maximise the use of walking, cycling and transit.

	• Mitigate air, water and land pollution. • “Greening” major road corridors.
A city of distinct, liveable communities with a variety of housing, employment, parks and facilities which are accessible.	• Maximising access to community services and facilities by walking, cycling and utilising transit. • Linking community cores and employment areas with rapid transit • Offer a range of transport options for persons with disabilities.
An innovative city – creating local businesses and a strong economy.	• Enable the efficient movement of goods and services. • Keep businesses and institutions accessible to clients. • Helping employers improve commuter options.
A responsible and responsive city.	• Promoting efficient modes of transportation. • Provide information to commuters that help them make responsible transportation choices.
A healthy and active city.	• Promote “active transportation”. • Provide comprehensive walking and cycling networks. • Minimising air pollution from transportation.

Source: City of Ottawa (2008)

Apart from the main master plans, additional plans such as the Ottawa Pedestrian and Ottawa Cycling Plan were compiled to ensure the planning is monitored and implemented. A very similar modus operandi to that of Ottawa was followed in compiling the Transport Master Plan for the city of Scottsdale (Arizona, United States of America). The Transport Master Plan also forms part of the bigger General Plan (2001) for the city, while the Transport Master Plan is divided into 5 secondary plans including Policy, Street, Pedestrian, Bicycle and Transit plans. The city council also decided to divide the city into 3 smaller areas to ensure that the correct planning will be allocated to homogeneous planning areas (City of Scottsdale, 2008: 1).

The table below lists the five secondary plans and the key objectives of each.

Table 14: Five complimentary plans for the transport master plan

Five Secondary Plans	Key Objectives
Citywide Policy	• Compile policies that promote non-motorise trips and reduce the per capita number of vehicle miles travelled. • Recognise different transport solutions for different community areas. • Dedicate a higher percentage of available capital funding for transit, bicycle, trail and pedestrian system enhancements. • Promote the efficiency of transport systems.
Streets Element	• Design, operate and maintain Scottsdale's streets to provide safe and convenient access and mobility for all users.
Transit Element	• Provide a mix of transit options (bus, rail and modern streetcar). • Enhance public-private partnerships. • Transit options must be available at neighbourhood, local and regional levels.
Bicycle Element	• Examine ways of promoting the overall bicycle system and routes, especially between schools, parks and within neighbourhoods. • Provide a safe, connected and convenient on-road bicycle network through the city. • Incorporate human-powered transportation into the policy-making, planning, design, construction and maintenance phases of all current and

	new documentation.
Pedestrian element	• Make Scottsdale more walkable. • Promote walking as the best way for travelling short distances. • Create a street environment that is safe and secure for pedestrians. • Promote land uses that enhance public spaces, neighbourhoods, commercial and employment areas that will entice more people to walk. • Allow greater priority for pedestrians than additional auto capacity in urban corridors and high-activity areas.

Sources: Own construction based on City of Scottsdale (2008).

The transportation system must be the backbone of the city. Historically, the city was dominated by the car as the primary mode of transportation. This will most likely remain the mode of choice, but the alternatives will provide greater accessibility for residents and visitors, alleviate pollution and congestion and serve and influence land use patterns (City of Scottsdale, 2008: 19).

4.2.4. International non-motorised transport-specific policy

Non-motorised transport policies compliment with the transport master plan of a city and discuss a section of the transport system. Complimentary to the Ottawa Transport Master Plan (2008) are the Ottawa Pedestrian Plan (2009), the Ottawa Cycling Plan (2008) and the Ottawa Light Rail Plan (2012).

In the city's quest to decrease private vehicle use (as a presentation of the population) and evolve in a more sustainable and environmental friendly city, the direct alternatives (to the vehicle) are NMT modes. However, public transportation can be considered to be both a direct (people use rail instead of private vehicles) and indirect (public transport compliments NMT modes) due to the fact that NMT is only viable for short distances. Therefore NMT commuters can utilise public transport (as opposed to reverting back to the services of the motorised vehicle) instrument in this endeavour for sustainability (City of Ottawa, 2008a: 42-44).

The Pedestrian Plan (2009) is a long-term orientated initiative with a timeframe of 20 years and longer which aims to ensure walking becomes a culture for the citizens of the city. The document was compiled to examine the status quo of walking in the city and then to recommend specific

changes with regard to infrastructure, policies and programs that would encourage more people to walk more often (City of Ottawa, 2009:2). With this borne in mind, the vision was formulated as follows:

“Facilitate year-round walking in the city of Ottawa as a comfortable, realistic, viable, well-integrated and well-used component of the transportation system in the City.” (City of Ottawa, 2009:3).

The goals and objectives identified in the pedestrian plan (2009) are directly aligned with those identified in the Master Plan (City of Ottawa, 2009:4-5). The three goals are:

- Increase the pedestrian modal share across the city (increase the number of pedestrians compared to other transport modes).
- Guide and assist future city developments to ensure a high-quality pedestrian environment.
- Develop and strengthen the culture of walking.

The four objectives for reaching these goals are;

- Develop an integrated pedestrian network throughout the city with connection points at important destinations and transit facilities.
- Develop policies, tools, processes and practices necessary to plan, implement and maintain the pedestrian system.
- Develop programs to encourage people to walk.
- Define implementation priorities for the pedestrian network and supporting programs.

The long-term 20-year viewpoint is also relevant to the Ottawa Cycling Plan (2008b). The strategy here, however, was to divide the 20 years, and earmark the first 10 towards getting the infrastructure and program initiatives in place. The second 10 years were earmarked for long-term planning initiatives (City of Ottawa, 2008b:3).

To ensure the plan would realise and be successful, the city identified a vision, goals and objectives (City of Ottawa, 2008b:6-10):

The vision: “Develop a city-wide, visible and connected cycle network of on and off-road facilities that is actively used by all types of cyclists. This network will be supported by various programs, policies and strategies that will help to identify Ottawa as the premiere cycling capital of Canada, and as one of the most sustainable transportation cities in the world.”

The goals are to link, connect and expand cycle facilities to serve both urban and rural areas, whilst making cycling a safer mode of transport and promoting it as an active and healthy method of travel. If the above is implemented correctly, it is hoped that the cycling modal share will increase.

The objectives:

- Develop a connected city-wide cycling network.
- Develop cycling planning and design guidelines.
- Define priorities and develop an implementation strategy.
- Determine the financial costs of establishing a cycle network.
- Harmonise cycling policies.
- Review current cycling promotion, education programs and supporting facilities.

4.3. South African transport policies

South Africa as a developing country does not have the same level of transportation planning, across all spheres of government, as compared to developed countries, and more specifically North America. The lack of transportation policies are evident, and even more so the lack of non-motorised transportation policies, especially at provincial, district and local level as can be seen with the policies scrutinised in this chapter.

The Municipal Systems Act (Act 32 of 2000), relevant to district and local municipalities does not specifically necessitate the compilation and approval of a transport plan. It does, however, require the governing bodies to compile an Integrated Development Plan (IDP) and Spatial Development Framework (SDF) as part of the IDP. This framework should however include the development strategies and priorities of the city council, which should include transport developments (South Africa, 2000).

The relevant policies and frameworks pertaining to the case study used in this study (Upington, Northern Cape Province), will be discussed; including:

- National Level
 - Draft National Non-Motorised Transport Policy document, 2008, and a
 - National Transport Master Plan, 2011 (NATMAP 2050).
- Provincial Level
 - Northern Cape Provincial Spatial Development Framework, 2012 (NCPSDF).
- Local Level
 - The //Khara Hais Spatial Development Framework, 2012.

4.3.1. National Non-motorised Transport Policy, 2008

This document provides a single framework and an enabling environment for the Department of Transport, other departments and stakeholders to address the challenges inherent in NMT.

The following details of the policy are crucial (Department of Transport, 2008: 15):

- **Vision** –“Non-motorised transportation will be a sustainable and stimulant mode of transport for social and economic development within an integrated efficient transport system.”
- **Mission** –“The mobility needs of marginalised communities and NMT users shall be met through the provision of a safe, secure and reliable transport system.
- **Objectives** –
 - Integration of NMT into transport systems and spatial planning.
 - Facilitation for the use of NMT modes.
 - Development of infrastructure.
 - Recognise NMT as an essential mode of transport.
 - Enhancement of traffic legislation that recognises NMT.
 - Allocation of sustainable and adequate funding.
 - Reduce fatalities/accidents of NMT road users.
 - Facilitation of research and new initiatives to improve NMT.

The core reasons listed for the promotion of NMT development are to improve the quality of life of all citizens, energy conservation and the improvement of safety conditions irrespective of the travelling mode (Department of Transport, 2008: 4).

The document further elaborates on the “Policy Statements” and the responsibilities of different spheres of government. Overarching but relevant NMT statements include: (Department of Transport, 2008: 28-53):

- Municipalities will update their traffic by-laws in line with the updated and new regulations that incorporate NMT.
- The Department of Transport (DoT) will ensure that road infrastructure is improved to accommodate cycling needs.
- All Integrated Transport Plans (ITP) should cater for the use of cycling, with appropriate modal split and set concrete goals.
- The Provincial Department of Transport will ensure that local governments are capacitated within five years of implementing this policy.

- The municipalities, in collaboration with provincial departments, will develop funding models that suit their local needs.
- Local government needs to be capacitated as it is their mandate to implement all government policies.

4.3.2. National Transport Master Plan, 2011

The vision of the National Transport Master Plan (2011) reads as follows: “The NATMAP 2050 goal is to develop a dynamic; long-term; and sustainable land use/multi-modal transportation system...” (Department of Transport, 2011: 54).

To substantiate the above vision, six guiding principles were identified in NATMAP 2050 (2011:1521) when sustainability was taken into account, relating to environmental, social and economic spheres. They are:

- Sustainable development.
- Equitable access and poverty alleviation.
- Promote compact sustainable human settlements and integrated settlement patterns, while discouraging urban sprawl.
- Protection of natural resources and human health and safety.
- Energy security, efficiency and diversification.
- Mitigate greenhouse gas emissions to international standards.

These guiding principles were identified partly because of the fact that oil scarcity is inevitable and that the government realised that the South African transport system is extremely vulnerable to changes in the availability of liquid fuel and the price. The following quote, from the document NATMAP 2050 (2011) summarises the situation: “This is even truer for public transport, where currently most people make use of taxis. It can be expected that an increase in the cost of transport will have a significant impact on the low income group of people, and that they will either be forced to move closer to where there are job opportunities, or become excluded from the labour market. Preparations to manage the changes properly have to start immediately.” (Department of Transport, 2011:1536.)

The actions identified (Department of Transport, 2011:1536) to counter the above mentioned problem situation are categorised into short-term (next 3 years [from 2011]), medium-term (up to 7 years [from 2011]) and long-term (up to 10 years [from 2011]) actions:

- Short term:
 - Promote non-motorised transportation.
 - Create an energy-awareness programme.
 - Promote fuel-efficiency measures.
 - Plan for new long-term transportation infrastructure.
- Medium term:
 - Implement transport mode shifts.
 - Continue public education.
 - Finalise long-term transportation infrastructure.
- Long term:
 - Implement long-distance infrastructure.
 - Expand the transport mode shifts.

It is evident that although South Africa is experiencing typical motorised problems, non-motorised transportation still plays a minor part in the future plans.

4.3.3. Northern Cape Provincial Spatial Development Framework, 2012

The Northern Cape Province (one of the nine provinces in South Africa) has no non-motorised transport-specific policy to date (2013). The provincial SDF is however the guiding growth policy and consists of the following data regarding NMT:

As part of the transport strategies and guidelines it is proposed that an investigation be conducted on how affordable and sustainable mobility in rural areas can be enhanced through the roll-out of non-motorised transport initiatives, including the provision of safer pedestrian pathways and the expansion of a bicycle programme (DMP, 2012a:149).

4.3.4. //Khara Hais Spatial Development Framework, 2012

The //Khara Hais Municipality also has no specific NMT policy. The SDF (Spatial Development Framework) is once again, as was the case for the Northern Cape Province, the guiding planning document. The information obtained can be summarised as follows:

“As part of the central business district (CBD) of Upington, special attention must be given to a) reducing heavy through-traffic in the CBD b) creating basement parking in strategic locations c) converting certain streets to pedestrian streets in order to facilitate and encourage pedestrian

movement and limiting the dominance of the car and finally d) creating detailed landscaping within the CBD.” (DMP, 2012b:35).

4.4. Conclusion

The following aspects can be derived from the above-mentioned international and national policies, with specific emphasis on transport planning discussed:

- From the policies it is clear that a shift from the dominated private vehicle to non-motorised alternative modes is desired (Department of Transport, 2011: 1536). Regarding some of the main reasons, the policies correlate in identifying health issues, environmental issues, traffic congestion, and the lack of options, practicality and equality.
- A universal result from the international policies is that non-motorised planning must be planned parallel with public transportation systems.
- The majority of the policies dealt with, acknowledge the domination of the private vehicle in the past and accept that it will most likely remain the mode of choice for the future. The idea is therefore to diversify the transport system and provide residents with different transport choices - not to replace the entire private vehicle system with NMT.
- The South African Transport Master Plan (2011), the main transport document of the country, identified and acknowledged the private vehicle orientated problems, but still opted to find alternative measures to help sustain the current transportation system, rather than to identify non-motorised transportation as a long-term large-scale solution.
- It is clear from the local SDF that there is a problem with heavy traffic, parking and a one-dimensional transportation system. It is thus proposed (by the SDF) that the heavy traffic be limited to two streets, underground parking be provided and that some of the streets in the CBD be modified to pedestrian-only pathways.

South Africa has come a long way in compiling transportation-specific policies. These documents are clear in intent and reasonably specific about national and regional transportation. However few planning content on specific urban transportation exists. Furthermore, indications as to how these documents should be used to achieve the required urban outcomes are lacking. Finally, little information exists concerning the role of movement in settlement-making, which is the central planning issue. Despite the clear and positive directives, in practice, there has been insufficient change, on both the urban and transport fronts (Dewar & Todeschini, 2004:5).

Non-motorised transport modes are often considered vital elements of sustainable transport systems (Crawford, 2002: 85). A high share of non-motorised transport modes would certainly

contribute to a more attractive urban environment. The core question asked by Daniel and Rietveld (2004) is whether the provision of infrastructure and facilities will be sufficient to promote the use of non-motorised methods or whether more stringent policies are needed, implying the discouragement of using competing modes (Daniel & Rietveld, 2004:531).