

(A4046)



TRAFFIC CALMING POLICY

APPROVED BY COUNCIL : dd/mm/yyyy

CIVIL ENGINEERING DEPARTMENT

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1. INTRODUCTION

The purpose of this document is to set out a policy regarding traffic calming methods to ensure the safety of pedestrians and road users within Langeberg Municipality. From current problems within Langeberg area and the assistance of The National Road Safety Strategy (NRSS) 2016 -2030, this policy is set out to best identify and implement necessary traffic calming methods to achieve such goals.

The policy outlines the following factors:

- Road hierarchy
- Role players
- Traffic calming: aims, principles, applicability and methods
- Traffic calming evaluation and implementation procedure

This policy provides the objective to moderate traffic behaviour through engineering components and legislative measures with the aim to reduce speed or traffic volume and improving road safety for road users within the Langeberg Municipal area.

1.1. Definitions, Acts and Abbreviations

“Road hierarchy”	means roads are categorised according to its use and capability.
“Traffic calming”	means traffic is deliberately slowed down by means of an obstruction such as road humps, rubble strips et.
“Council”	means Langeberg Municipal Council composed and elected in term section 157 of the Constitution.
“Class”	means public roads and paths in the country must be allocated into one of six functional classes, numbered for ease of reference. Each class has a unique function to fulfil.
“Arterial”	means any Class 1, 2 or 3 vehicle priority, access managed, mobility route whose major function is to provide for movement of person and goods vehicles between cities, towns or urban districts with as few restrictions as possible.
“Collector”	means a road which collects/distributes traffic in a local district.
“Distributor”	means long distance arterials which distribute traffic over wide areas.
“National Road Traffic Act:	referes to No. 93 of 1996 to provide for road traffic matters which shall apply uniformly throughout the Republic and for matters connected therewith.
“Urban Area”	refers to the area of sparse development.

“Rural Area”	means an area that has been subdivided into erven and includes formal and informal rural settlements of one hectare or less.
“TRH26”	refers to the “South African Road Classification and Access Management Manual, vers 1.0 August 2012, COTO”
“Mobility”	means the ability to reach a destination with a minimum delay.

2. ROAD HIERACHY

The Road Hierarchy categorises roads according to its function, this is important in deciding on traffic calming methods as its function still needs to be served throughout.

A detailed table below explains the different road classes found in South Africa.

This table can be used with Annexure A, Table B and C from the TRH26 for better understanding.

Road Class		Speed (km/h) within area	Description and Function	Traffic Calming Method
1	Primary Distributor Or Principal arterial (Freeway)	Urban – 120 Rural - 120	Public roads that are found usually through cities, or between provincial capitals. High mobility road with lower access for movement of large volumes of people, raw material and manufactured goods and agricultural produce.	No traffic calming. Other methods allowed: - Law enforcement - Signage
2	Regional Distributor Or Major arterial	Urban - 80 Rural - 120	Public roads found usually between provincial capitals, large towns and municipal centres. High mobility road with lower access for movement of large volumes of people, raw material and manufactured goods and agricultural produce.	No traffic calming. Other methods allowed: - Law enforcement - Signage
3	District Distributor	Urban - 70 Rural - 100-120	Public roads found between town and rural	No traffic calming. Other methods allowed:

	Or Minor arterial		residential areas. May also provide link between Class 2/1 routes. Moderate mobility road with controlled high level access for movement of people, raw material and manufactured goods and agricultural produce.	- Law enforcement - Signage
4	District Collector Or Collector road	Urban - 60/50 Rural - 80-100	Public road between villages farming areas and communities which serve local services. Roads usually link to Class 3 roads. High level of access with lower levels of mobility for low traffic volumes of people, raw material and manufactured goods and agricultural produce.	May be implemented following proper investigation. Traffic control methods may include: raised intersections or roundabouts.
5	Access Roads or Local road	Urban - 40 Rural - 60-80	Public road within residential areas. High level of access with very low mobility routes for the movement of low volumes of people and goods.	May be implemented following proper investigation.

Table 1: Road Classification

3. ROLE PLAYERS

1. Council of Langeberg Municipality:

- Approves Policy.
- Plays role in communicating Policy to the public and identifying needs for road safety interventions within communities.
- Issues/complaints are reported to Municipality: Roads Department for further investigation.

2. Municipality: Roads Department

- Issues brought forward by Council are investigated.
- Communication between Council and Department on matter.

3. Public

- Reports concerning issues to Council.

4. TRAFFIC CALMING

The objective of Traffic Calming, with monitoring traffic behaviour, is to calm traffic and improve safety of users.

4.1. Aim

To ensure safety for all road users, including pedestrians. This guarantees;

- Reduction of vehicle speed.
- Reduction of accidents or and the severity of such.
- Extension of the quality of roads.

4.2. Applicability

4.2.1. Principles

The below listed principles will apply to help support the decision making of implementing any traffic calming measures:

4.2.1.1. *General:*

- No measures allowed for Class 1,2 and 3 roads
- Class 4 and 5 roads are allowed traffic control, following the correct procedure.

4.2.1.2. *Business Districts*

- Pedestrian or cycle paths may be indicated by using colour or change in road texture.
- Traffic calming measure shall not be supported independent of a comprehensive Urban Project Assessment.

4.2.1.3. *Schools*

- Traffic Calming Measures may apply for the safety of children and road users.

4.2.1.4. *Crèches / After School facility*

- Safety responsibility remains the institutions which means the institution is to ensure children to stay on premises and are not to access the roads unattended.
- Langeberg Municipality shall only provide traffic calming measures outside crèches/after care facilities if circumstances and proper investigation necessitate such.

4.2.1.5. *New Developments*

- Within the new residential development any measures will be designed and implemented with consent and satisfaction of the Langeberg Municipality at development stage.

- Funds: any surrounding street outside the development that requires traffic calming shall be designed and implemented to the satisfaction to Langeberg Municipality and at developers cost.

4.2.1.6. Industrial Street Network

- No traffic calming measure shall be allowed.

4.2.2. Location

Traffic calming measures and the location thereof is limited to Class 4 collector Streets and Class 5 Local Streets within residential areas.

Exceptions of implementation may be made in cases that include:

- Class 5 local streets within commercial areas that carry low volumes of vehicle traffic but large numbers of road users (pedestrian/cyclist).
- Class 5 Local Street in a residential area in the vicinity of public facilities.
- Intersections or locations where a large number of road users cross a Class 4 Collector Street in a residential area in the vicinity of public facilities.

4.2.3. Traffic Calming Measures

With the main purpose of slowing traffic, the 4 Categories of Traffic Calming Measures include:

Category 1: Vertical Deflections

Category 2: Horizontal Shifts

Category 3: Roadway Narrowing

Category 4: Road Closures

In Langeberg Municipality the most common measure used are Speed Humps, falling under category 1; Vertical Deflection.

Category Descriptions

Category 1: Vertical Deflections		
a) Speed Humps		
Speed Humps are raised sections of the road way that can either be spread across the road linear, spaced across the roadway in circular humps etc.		
Standard specifications of speed Humps are to be applied:		
Height	-	75mm
Width	-	3.8m

Spacing between Humps	-	150m
Distance from intersections	-	25m-40m
Distance from stop sign	-	100m
b) Speed Table		
Like a speed hump, a speed table is found crossing the road way and consists of a flat section in the middle with ramps on the ends. This is usually found at pedestrian crossings.		
Width	-	road width
Length (flat surface)	-	10m maximum
Ramp ends	-	3m maximum
Height of table (flat surface)	-	60mm maximum
c) Raised intersection		
An intersection that is raised throughout the whole area with ramps at the ends.		
Category 2: Horizontal Shifts		
a) Roundabout		
Is considered as a raised island in the centre of an intersection forces vehicles to slow down as the circle around the island.		
b) Chicane		
This consists of a series of narrowing kerbs, alternating side to side and creating a "S" shape in the roadway.		
Category 3: Roadway Narrowing		
This is either done by:		
1. a) choker when kerbs are added at intersections to narrow the width of the section of roadway or by 3 b) centre island narrowing when a median barrier is placed in the centre of the roadway along a section of the roadway, this narrows the road along the section.		
Category 4: Closures		
Closures can either be half or full width which reduces traffic by obstructing traffic movement in one or more directions.		
Consideration of these measures is made in location of street at which traffic needs to be slowed down.		
Any of the above listed measures is applicable as long as it serves the criteria listed in 4.2.4.		

Table 2: Traffic Calming Measure Categories

4.2.4. Traffic Calming Measure Criteria

The measure chosen will have gone through the criteria check list covering the safety, feasibility and affordability.

- Safety for road user and public is important, therefore measure should not result to being a hazard to any road user, careful design is essential to prevent possible injury and damage.
- Technical feasibility would cover the location, installation as well as pavement engineering and lifecycle costs.
- The costs with regards to the installation and lifecycle cost assists the Department for budgeting.

4.3. Implementation

4.3.1. Traffic Calming Requests

Traffic calming shall only be implemented if it's gone through the correct route. This avoids miscommunication and helps for proper planning and budgeting.

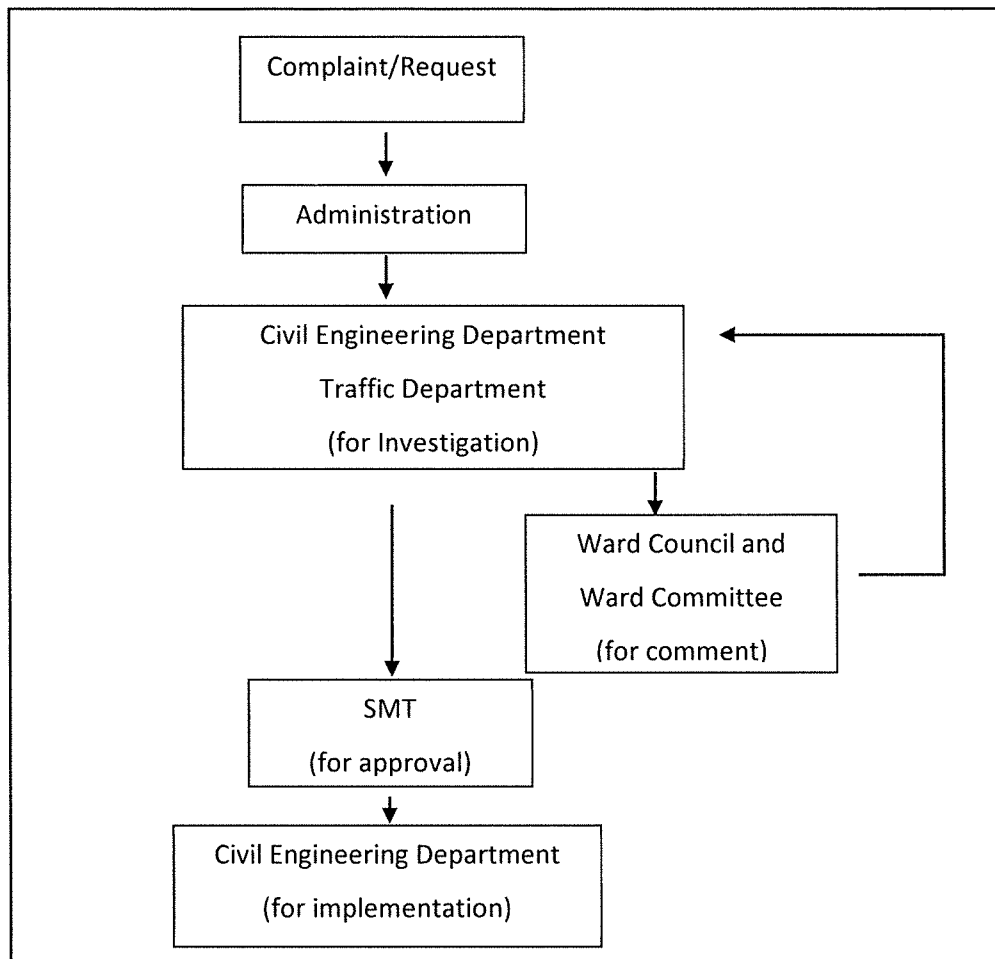


Figure1: Traffic Calming Request Procedure

Any request from the community can be made to the Administration.

The formal request should obtain the following information:

1. Location: Address where problem is experienced.
2. Description of the problem
3. Date/Time of the problem experienced/or common occurrence.

With this formal complaint any supporting documentations, such as petitions, if any may be attached.

The complaint will be taken to the Civil Engineering Department: Roads and Stormwater Division for further investigation in conjunction with the Traffic department and if approved funds are available.

Recommendations on approval or rejection shall be reported to the SMT for approval.

The Civil Engineering Department will then be reported back to for the implementation phase.

4.3.2. Traffic Calming Investigation

The aim of investigating the request is to prevent incorrect or unnecessary use of traffic calming.

The request or complaint received by the Department shall go under investigation following the same procedure set out in Design and implementation of speed humps: Supplement to National Guideline for Traffic Calming, Figure 3.1 page 3-2, annexure B attached for reference. The investigation will be filled in for proper planning, the investigator will fill in a form found in Annexure C.

Step 1: Formal complaint from public

All relevant documents to be attached.

Step 2: Problem identification

Problem is identified and assessed. Decision is made whether traffic calming can resolve the issue or not.

Step 3: Road category identify

Assess the road hierarchy:

Requests concerning Class 1,2 and 3 roads will be rejected.

Requests on Class 4 may proceed with investigation if there are no conflicts of pedestrians or vehicles and if the primary function of road is not an access, if these circumstances exist the request will be rejected.

Requests on Class 5 roads may proceed with investigation.

Step 4: Information Collection

To determine whether traffic control is warrant the necessary information is collected. The necessary information includes:

- | | | |
|---|---|---|
| <ul style="list-style-type: none">- Speed along route- Traffic volume along route- Pedestrian volume- Conflict potential- Accidental statistics- Frequency of buses and services along route- Emergency routes- Physical characteristics | } | <i>Traffic count will be conducted.</i> |
| | } | <i>Traffic calming measures aren't applicable on main service routes.</i> |

The information gathered will be used with the principles set out 4.2.1 in this policy.

Step 5: Suitability of speed humps or alternative traffic calming method

At this stage, given the information gathered, different traffic calming methods are investigated for its suitability.

Speed humps may not be suitable along routes that serve emergency vehicles, buses etc.

The road hierarchy need to be able to still serve its function with a suitable traffic calming method chosen.

Step 6: Applying Warrants

To prevent unnecessary placement of Speed Humps, Speed Humps are warranted in the following cases listed below:

For Speed Hump in Series:

- *The 85th percentile speed exceeds the desired speed (40 to 80km/h)*
- *The average peak hour volume exceeds between 400 and 600 vph.*

- For Single Speed Hump*
- *Hazardous location or pedestrian/vehicle conflict*

Step 7: Plan and Design of Speed Humps

This includes the choice of speed hump/alternative traffic calming method with its dimensions and position to achieve the desired effect.

Step 8: Public Involvement

After implementation has been formalised and designs have been drafted the Ward Councillor will be informed of the proposed action, with reasons behind the decisions. Upon acceptance of parties the implementation can commence.

Step 9: Implementation and Monitoring

Construction may be done Departmentally or be taken out on tender depending on the pricing. Monitoring of speed hump or alternative traffic calming method should be done to determine whether the desired objective was achieved. If not modifications should be made to achieve the objective.

5. ANNEXURES

ANNEXURE A: TABLE B AND C FROM TRH26

Table B: Rural Functional Road Classification

Function			Description		Mobility				
Basic Function	Alternate functional descriptions	Determining function	Class No (R_)	Class name	Origin / destination	Through traffic component	Reach of connectivity	% of built km	AADT (average annual daily traffic)
Mobility	Vehicle priority, vehicle only, long distance, through, high order, high speed, numbered, commercial, economic, strategic; route, arterial road or highway.	Movement is dominant, through traffic is dominant, the majority of traffic does not originate or terminate in the immediate vicinity, the function of the road is to carry high volumes of traffic between urban areas	1	Principal arterial*	Metro areas, large cities, large border posts, join national routes	Exclusively	> 50 km	2 - 4% Classes 1 and 2	1000 – 100 000+
			2	Major arterial*	Cities and large towns, transport nodes (harbours and international airports), smaller border posts, join major routes	Exclusively	>25 km		500 – 25 000+
			3	Minor arterial*	Towns, villages and rural settlements, tourist destinations, transport nodes (railway sidings, seaports, landing strips), small border posts, other routes	Predominant	> 10 km	6 - 12% Classes 1, 2 and 3	100 – 2 000+
Access / Activity	Access, mixed pedestrian and vehicle traffic, short distance, low order, lower speed, community / farm, road or street.	Access, turning and crossing movements are allowed, the majority of traffic has an origin or destination in the district, the function of the road is to provide a safe environment for vehicles and pedestrians using access points	4	Collector road	Connect farming districts, rural settlements, tourist areas, national and private parks and mines to mobility routes	Minimal	< 10 km	20 - 25%	< 1 000
			5	Local road	Farm or property access, connection to other routes	Nil Discontinuous	< 5 km	65 - 75%	< 500
			6	Walkway (path or track)	Settlements, farms, transport nodes, water points	n/a			

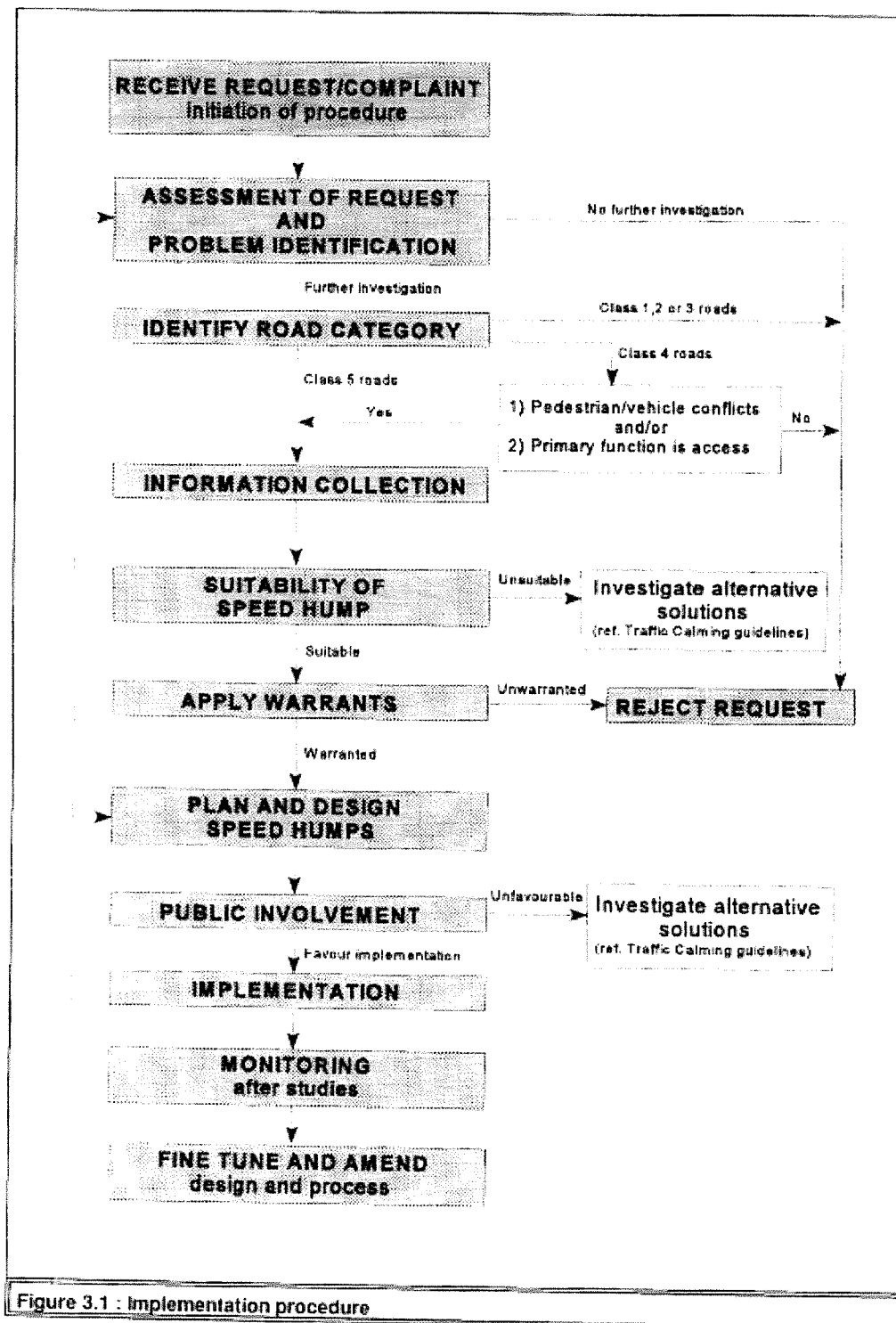
* In rural areas, the term distributor may be preferred to arterial

Table C: Urban Functional Road Classification

Function			Description		Mobility				Traffic	
Basic Function	Alternate functional descriptions	Determining function	Class No (U_)	Class name	Through traffic component	Distance between parallel roads (km)	% of built km	Reach of Connectivity	Expected range of ADT (average daily traffic)	% of travel veh-km
Mobility	vehicle priority, vehicle only, long distance, through, high order, high speed, numbered, commercial, economic, strategic; route, arterial road or highway.	Movement is dominant, through traffic is dominant, the majority of traffic does not originate or terminate in the immediate vicinity, the function of the road is to carry high volumes of traffic between urban districts	1	Principal arterial (freeway)	Exclusively	5 - 10 km	5 - 10% Classes U1 and U2	> 20 km	40 000 - 120 000+	40 – 65% Classes U1 and U2
			2	Major arterial	Predominant	1.5 - 5.0 km		> 10 km	20 000 - 60 000	
			3	Minor arterial	Major	0.8 - 2.0 km	15 - 25% Classes U1, U2 and U3	> 2 km	10 000 - 40 000	65 – 80% Classes U1, U2 and U3
Access / Activity	Access, mixed pedestrian and vehicle traffic, short distance, low order, low speed, community, street.	Access, turning and crossing movements are allowed, the majority of traffic has an origin or destination in the immediate area, the function of the road is to provide a safe environment for vehicles and pedestrians using access points	4a	Collector street, commercial	Discourage		5 – 10%	< 2 to 3 km	< 25 000	5 – 10%
			4b	Collector street, residential	Discourage			< 2 km	< 10 000	
			5a	Local street, commercial	Prevent		65 – 80%	< 1 km	< 5 000	10 – 30%
			5b	Local street, residential	Prevent			< 0.5 km (1 km Max)	< 1 000	
			6a	Walkway, pedestrian priority	Ban					
			6b	Walkway, pedestrian only	Ban					

ANNEXURE B: FIGURE 3.1 IMPLEMENTATION PROCEDURE

3-2



ANNEXURE C: TRAFFIC CALMING INVESTIGATION

Traffic Calming Measure Investigation

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