

### 11.1 General

**T**he Community Access Roads programme has from inception been an evolutionary process. The strategies presented here will have to be tested and refined to ensure that the programme is a success, without losing focus of the primary objective which is to provide local roads for rural development.

The strategies are intended to co-ordinate and manage an ambitious programme which is far more than merely providing access to communities, but rather to develop growth and capacity within communities so that they can become involved in the management and decision making process of their own affairs. If the programme is well managed, it will have many spin offs, such as:

- developing a local road building and maintenance mini-industry,
- community building by linking up previously isolated communities,
- opening up new market opportunities,
- building up capacity within communities to manage their own affairs,
- providing work opportunities in the form of labour intensive construction, and
- skills training.

The implementation strategies have where possible been structured to allow progress to be monitored, so that the long term objectives of the programme can be achieved.

## **11.2 Funding**

### **11.2.1 Departmental Funding**

**T**he Department has stated its intention to spend R800 million over the next 10 years to upgrade and maintain community access roads within the Province. Since the funding may not yet have been secured, this Needs Study should assist the Department in lobbying for funds. The intention throughout has been to add value, which in turn will generate further funds for the Province by increasing the tax base.

The implementation of the CAR programme must not be viewed in isolation and should be seen in the context of the total Provincial funding allocation for roads, which in recent years has been in a steady decline in real terms.

Statistics from the Maintenance Section of the KwaZulu-Natal Department of Transport show an alarming deterioration in the condition of all the Provincial Main Roads and District Roads.

The improvement of Local Roads at the expense of the existing Provincial road network would have far reaching economic implications and should be avoided at all costs.

It is therefore imperative that additional funds be generated to assist in funding the CAR programme, particularly if the current budget trend continues.

### **11.2.2 Outside Funding Sources**

As outlined in Section 4, various other Provincial Departments and local government bodies have been involved in funding road projects in rural areas over recent years. While this may supply some of the immediate road needs in some areas, this ad hoc and un-coordinated approach should be discouraged by the Department of Transport. In particular the maintenance of these roads will ultimately rest with the Department of Transport which then will have to maintain them from their own limited budget.

Outside funding agencies should therefore be encouraged to fund roads through the Department of Transport within the framework of the CAR programme. Where funds are not

transferred to the Department for implementation, the other Provincial Departments and other bodies should be encouraged to follow the procedures outlined in Section 4.3. The Department of Transport should be under no obligation to maintain roads which have not been approved by them within the recommended CAR framework and which do not appear on their priority ranking lists which have been prepared in conjunction with the RRTFs. Preliminary discussions have already been held with several of the other funding agencies and it is important that they be brought on board to make the programme a success. The findings of the CARNS report must therefore be brought to their attention and copies of the report should be made available to them to encourage participation.

The following Departments / Agencies should be targeted:

- The former Joint Services Boards, JSBs (now Regional Councils),
- Department of Works (Provincial),
- Department of Public Works (National),
- Independent Development Trust,
- Department of Agriculture, and
- Development Bank of Southern Africa.

While the Departments of Health and Education have traditionally not funded roads, applications are frequently made by communities to construct roads to serve clinics and schools. Closer co-operation should be encouraged between these Departments and the Department of Transport so that these facilities are constructed only when finance is available to construct and maintain the roads. The Departments of Health and Education should be encouraged to contribute towards the funding of roads to their facilities, particularly in cases where the access roads are relatively low on the regional priority list. Alternatively the building of the facilities should be delayed until the access road is sufficiently important to be constructed with Departmental funds. At the very least the Department of Transport and the local RRTF should be advised of the need and intention to provide the school or clinic as early as

possible in advance (at least one or two years) such that coordinated planning may be undertaken.

The CARNS report should also be used to pursue funding from foreign sources. The Department's long term commitment to the programme, which generally follows international trends in rural development, should be viewed favourably by such agencies, who are generally reluctant to fund projects that do not create long term development sustainability.

Where the foreign agencies cannot be targeted directly, this should be done through national government. A copy of the report should therefore be handed to the Department of Transport : National Roads, and arrangements made to provide additional copies on request, as may be required by potential donors.

## **11.3 Proclamation of Qualifying Roads**

### **11.3.1 District Roads**

It is expected that many of the roads identified as high priority roads in this Report will qualify for proclamation as District Roads, and this is supported as it will redress the backlog of roads serving the communal lands of KwaZulu-Natal.

Furthermore, in order to address previous imbalances, the Department should embark on a re-evaluation of the present District Road network, particularly in those areas where roads serve mainly privately owned land and are lowly trafficked. Low order District Roads may have to be de-proclaimed if they are not justified in order to achieve an equitable distribution of proclaimed roads throughout the Province.

This re-evaluation should be made using the latest guidelines for the proclamation of District Roads and where roads are to be considered for de-proclamation this should in all cases be done in consultation with the local Rural Road Transport Forum (RRTF).

### 11.3.2 Local Roads

By the Department committing itself to the upgrading of Local Roads, it is imperative that it also takes on the additional responsibility of assuring that adequate maintenance is carried out on the expanded road network.

## 11.4 Administration

### 11.4.1 Departmental

#### Head Office

In taking on the responsibility of Local Roads the Department may need to revise its present organisational structures, some of which have already been addressed in the recent report by Coopers and Lybrand, titled "**Investigation : Organisation & Post Establishment, Community Access Road Sub-Directorate.**"

The status of Local Roads should be reviewed and the necessary legislation promulgated to clarify responsibilities regarding Local Roads.

It is recommended that the overall co-ordination of the CAR programme be administered centrally, as matters regarding policy, budget allocations to the regions and overall standards should be a Head Office function.

While the CAR programme was initially developed under the Community Access and Construction Directorate, it is important that the programme be drawn into the mainstream of the Department's activities. This co-ordination between the various Directorates on matters concerning the CAR programme should also take place at Head Office level. Proposals concerning the interaction of the CAR Section with the other Directorates has also been addressed in the Coopers and Lybrand report and the recommendations made in the report are presently under review by the Department.

#### Regional Offices

The Regional Offices should be responsible for implementing the programme. Their function should be to work closely with the RRTFs in identifying road priorities in their region, and to provide the necessary financial, administrative and technical support to guide the RRTFs in deciding on roads priorities in a logical and co-ordinated

manner.

Provision should be made at Regional Offices for RRTFs to meet, obtain secretarial services and store documentation. Members of RRTFs should be provided with transport and meeting allowances at standard rates. This will assist with institutional capacity building and serve to promote the status and responsibilities of RRTFs.

The Regional Offices should also be responsible for the Local Roads database in their region. This will involve adding and assessing new roads applied for via the RRTFs and updating existing applications. This updated data should then be passed back to Head Office on an annual basis to be included in the Provincial database.

The Regional Offices should take over the responsibility of letting contracts for the upgrading of Local Roads in their region. The subsequent maintenance should also be their responsibility, albeit at a low level.

#### **11.4.2 Regional Road Transport Forums (RRTFs)**

The RRTFs' responsibilities have been outlined in Section 5, but in essence should consist of the following:

- to be the formal communication link between area-based communities and the Department,
- to accept and file applications for new roads from their communities,
- to evaluate and prioritise their Local Roads on an annual basis in conjunction with the Regional Engineer's staff,
- to help identify suitable candidates for development as emerging contractors,
- to assist in arranging local labour for contracts,
- to assist in resolving disputes between localised communities and the Department, and
- to verify that maintenance work is adequately completed by maintenance contractors prior to payment.

### **11.4.3 Consulting Engineers**

The use of consulting engineers and other consultants from the private sector should mainly be in a supportive role to the Regional Engineer's staff on technical matters such as:

- the letting of contracts
- the setting up and running of construction projects, and the related contract administration
- the letting and administration of maintenance contracts

Consideration could also be given to using consultants for the training of emerging contractors in matters relating to tendering, technical understanding and business affairs.

### **11.4.4 Lines of Communication**

Lines of communication should be clearly defined and the communications matrix shown in Figure 11.1 overleaf is proposed as guide. It is recommended that direct communication between the Department and communities should be avoided without representation and support from the RRTFs.

Although a Provincial Transport Forum has not yet been established, it would appear that such a Forum, comprising a representative from each RRTF, should be provided for to determine overall policies and coordinate strategies.

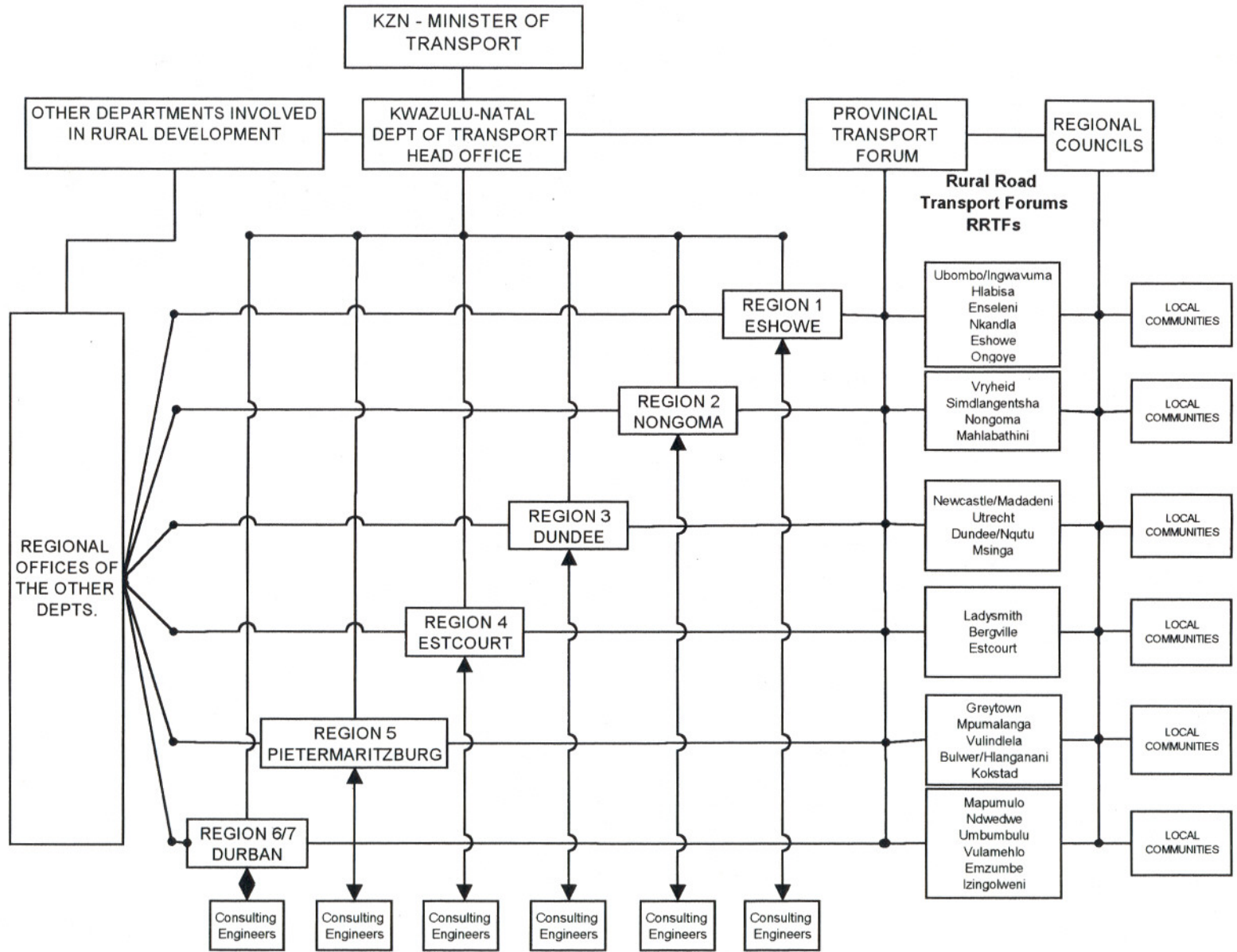


Figure 11.1 Proposed Lines of Communication between Stakeholders for the CARNs Strategy



## **11.5 Implementation Methodology of CARNS**

### **11.5.1 Co-ordination**

**A**s a first step in implementing the CARNS policies, the Department of Transport should initiate the establishment of partnerships with other Departments and agencies involved in rural development. This report should therefore be widely distributed among role players and should be the cornerstone of a new initiative to encourage a co-ordinated effort in implementing a rural development strategy.

The improvement of roads is the key to unlocking human, agricultural and economic development in these regions, and the successful implementation of projects by other Departments frequently depends on good accessibility. The proposals concerning the coordination of funding of roads by other agencies should therefore be addressed as soon as possible.

### **11.5.2 Prioritisation**

Prioritisation by means of the points system in accordance with the proposals of Section 6.4 should generally be done annually by each RRTF in anticipation of the following years budget allocations. It is proposed that the RRTFs be guided through this process initially by the Regional Engineer's staff to help them become familiar with the proposals. As they become more familiar with the procedures it will essentially become the responsibility of the RRTFs to prioritise their own road needs, although this should always take place in consultation with the Regional Engineer's staff.

It is important that all the roads for which applications have been received be included in the prioritisation process and that the priority ranking lists be open to public scrutiny to ensure transparency and credibility of the processes. The database at the Regional Engineer's offices should therefore be continually updated.

Prior to construction, all the roads that are earmarked for construction should again be evaluated in terms of the points system to ensure that the points allocation of the roads are indeed a true reflection.

The actual points allocated for the various types of facilities may be reviewed from time to time by the RRTFs if the emphasis is to be shifted from access to schools and clinics towards say agricultural development, for example. This approach has purposefully been recommended so that each RRTF can develop their own unique set of points depending on where they intend to focus their attention for development.

### 11.5.3 Allocation of Funding

#### District Level

It is proposed that the procedures outlined in Section 6.3 be used for the funding allocations to Magisterial Districts. This would be done on an annual basis once the Department's budget allocations have been approved by the Provincial Government.

The RRTFs should understand the concepts involved to ensure that they accept the impartiality of the approach.

#### Project Level

Once the district allocations have been made the RRTFs can allocate project funding in accordance with their road priority lists and maintenance requirements. **The administration of project funding should however remain with the Department, who will also be responsible for the standard of work.**

Proposals for roads standards have been made in Section 8 and project estimates should be based on these proposals.

#### Maintenance

It is essential that sufficient finance be allocated to maintenance before any new projects are allocated for funding and the RRTFs should clearly understand the importance of ongoing maintenance.

The proposals outlined in Section 9 should be used when estimating maintenance costs. The responsibility of the RRTFs is therefore not only to identify new road projects for construction, but also to ensure that roads that have previously been constructed receive the necessary maintenance allocations.

#### **11.5.4 Design and Supervision**

The design of Local Roads will mostly be done on site to suit the local conditions and a formal design will generally not be necessary. This can be done by the civil engineer or senior technician responsible for the implementation of the individual projects. The local communities must however be informed of the standards proposed, the borrowpits that are to be used and where any realignments are envisaged.

The design of stream and river crossings will be coordinated on site by the Regional Office using the Department's standard drawings and details, and where necessary specialist support and advice may be provided from the Bridge Section at Head Office.

The Department is likely to need assistance with the day to day supervision of the road construction projects as it does not have sufficient manpower to undertake and control the numerous projects that are envisaged for the programme.

#### **11.5.5 Construction**

##### **Plant Based Construction**

It is recommended that the higher order Local Roads and roads which could qualify as District Roads be constructed by plant based construction methods, as they will be subjected to higher traffic volumes and good compaction of earthworks and the cutting of road levels are necessary for these roads. The development of emerging contractors should be promoted during the course of these contracts, either by means of partnerships or where they have sufficient plant as independent contractors. The use of nominated subcontractors from the communities should be encouraged as part of this process.

##### **Labour Intensive Construction**

The lower order access roads are less suited to plant intensive construction as the roads are shorter and generally more remote. Since mobility is not of prime importance but rather all weather accessibility, and a reduced standard of rideability is generally acceptable, labour intensive construction is recommended.

The use of labour hire contracts should be developed under these contracts so that contractor development can take

place in communities that lack the resources necessary for the purchase of plant. The development of small labour hire teams in tasks such as the laying of pipes, construction of headwalls, construction of rock bolsters etc. could then be used as future subcontractors to the plant hire contracts as well as for subsequent maintenance contracts, which are to a large extent labour intensive by nature.

#### Emerging Contractor Development

As mentioned previously the development of local contractors is an important aspect of the programme and the effort required will very much depend on the resources available within the communities.

The development of small contractors who in turn will employ local labourers or labour teams is preferred to the purely labour intensive construction for the sake of employing local labour, as this does not bring with it any long term benefit. The split between plant based construction and labour intensive construction will therefore have to be reviewed from time to time. Eventually the purely labour intensive construction using labour on a daily rate basis will fall away as sufficient contractors are developed in an area.

The success of local contractor development will largely depend on continuity of workload. It is therefore important that the Department commit itself to these areas in a long term programme to guarantee a certain base load of work to sustain the newly developed contractors.

#### 11.5.6 Maintenance

Proposals for the implementation of maintenance procedures have been extensively dealt with in Section 9. The Department will have to decide whether it wishes to undertake the maintenance of Local Roads by

- (i) using its own resources,
- (ii) by means of maintenance contracts, or
- (iii) by giving communities subsidies to maintain their own roads, as is presently done for By-Roads,
- (iv) or a combination of the above.

Each brings with it difficulties which will need to be understood and addressed. The recommendation made in this report is for the development of local maintenance contractors who will undertake the work for the Department by means of maintenance contracts.

This approach is preferred because it promotes the development of a local construction industry and so allows market forces and a competitive industry to develop. This reduces the need for the Department to invest in expensive plant with the continuing costs associated with plant maintenance and additional staff.

While the use of subsidies to local communities could be viewed as a viable alternative, the proposed system for the development of emerging contractors provides greater benefits to all concerned and reduces the need for extensive capacity building and training input from the Department to communities over an extensive period of time. A particular advantage is that reasonable continuity of work may be assured to successful maintenance contractors who would have the mobility to follow the maintenance needs of the area.

Maintenance procedures will have to be finalised as soon as possible as the construction of Local Roads has already started.

## **11.6 Training**

### **11.6.1 Rural Road Transport Forums**

**T**he training of the members of the Rural Road Transport Forums has already begun and should eventually address the following:

- an understanding of their responsibilities;
- a basic understanding of how the Department of Transport functions and their relationship with the Department;
- administrative skills;
- some technical understanding of roads and road networks;
- a basic understanding of the Local Road information gathered to date as part of the CARNS exercise, and the ease with which information can be extracted from the computer database;
- a basic understanding of roads contracting and maintenance procedures; and
- the important role the RRTF can play in regional development in KwaZulu-Natal.

In time other matters may be identified which will have to be addressed to improve the capabilities of the RRTFs..

### **11.6.2 Emerging Contractors (Construction and Maintenance)**

A Workshop to initiate the development of emerging contractors was convened by the Minister of Transport in Durban on 1 October 1996. This resulted in the Department drawing up a list of emerging contractors wishing to be involved in contract work for the Department. At the Workshop the Department also presented a 10 point plan to simplify tendering procedures in order to promote entry level contracting.

A further workshop may be necessary to elaborate on the proposals and assist the emerging contractors with the pricing of tenders.

The grass roots development of labour only contractors from the local communities should be addressed separately under each contract. A lump sum item could be incorporated into the contract to facilitate the employment of labour teams using negotiated task-based labour rates.

## **11.7 Resource Requirements**

### **11.7.1 Departmental**

The restructuring, staff requirements and responsibilities for a Community Access Roads Sub-Directorate have been extensively addressed in the Coopers and Lybrand report commissioned by the Department.

### **11.7.2 Transport Forums**

It is not anticipated that the RRTFs will need to employ staff to perform their duties, as their responsibilities will be limited to co-ordination meetings and the responsibility of implementation will remain with the Department. They should however be allocated office space at the Regional Engineer's offices and be supplied with the necessary stationery to document their work and to keep records of Local Road applications. Their close proximity to the Regional Engineer's staff is important as their database will be managed in these offices and they will need regular access to this information.

The matter of payment of the RRTF members while performing their duties should be addressed as soon as possible, as this could influence their willingness to perform their duties as envisaged.

### **11.7.3 Consulting Engineers**

For the undertaking of this Community Access Roads Needs Study, an experienced consulting engineer was allocated to each area. Since they have gathered extensive knowledge of the roads needs and communities in their respective areas, they could play a supportive role to the respective Regional Engineers during the implementation process.

### **11.7.4 Emerging Consulting Engineers**

The use of partnerships with emerging consultants has already begun in the first cycle of construction projects presently in progress. It is expected that the emerging consultants will be able to handle projects independently with the appropriate contact and training.

Technology transfer on plant hire contracts will require supervisory staff from both firms to be present on site to promote joint supervision for limited periods.

