

SADA-WHITTLESEA GUIDE PLAN

By G. SLABBERT and J.D. KRIEL
(Department of Bantu Administration
and Development)

1. INTRODUCTION

In a report by the Institute for Planning Research at the University of Stellenbosch*, a development model for the Ciskei as a whole has been proposed. This report has already been accepted by the Ciskeian Cabinet. In the report, Sada-Whittlesea has been designated the regional centre for the Northern Ciskei, known as the Hewu region, with the accent on the administrative function in the initial stage. In time, this regional centre will also acquire an industrial function.

Proposals in broad principle were already made for the settlement of an additional 4 000 families and the erection of an educational training college in the vicinity of Whittlesea. To ensure the orderly development of the area it has now become necessary to compile a guide plan. Population projections for the year 2025 were used to determine the total land use requirements for this regional centre.

The aims of the guide plan are to site the major land uses and transportation network and to programme the development into phases as well as to indicate alternative courses of development.

It was necessary to delimit the study area in order to set geographical limits to the research. The major factor in the demarcation of the study area was the area of 2 280 ha required by the projected population of 103 700 for the year 2025.

Sada and Whittlesea lie in a basin which is bisected by the Oxkraal river. This basin has rather sharp demarcated boundaries and forms an ideal study area, because it lies within one drainage area. The demarcated area is approximately 60 square kilometres (6 000 ha) in extent.

The procedure followed in the research was to transfer all available data onto topo-cadastral maps of 1 in 50 000. All further research and final drawings were shown on this scale.

2. HISTORICAL AND REGIONAL BACKGROUND

The township of Whittlesea was surveyed in 1855 and then already consisted of several houses at the junction of two important routes, viz. from Cathart and Fort Beaufort to Queenstown. Although it remained a small village the township fulfills an important administrative and service function for Blacks. Sada was established near Whittlesea in 1964 as a rural township, for the purpose of re-settling black people from the Western Cape. This township has a purely residential function, and already houses several thousand people. Some industries have been established to provide employment opportunities.

As a result of its close proximity, Queenstown has a great influence on the provision of the more specialised retail services in Sada and Whittlesea.

There are excellent road connections between the development area of Sada-Whittlesea and Queenstown, Catchart and Seymour.

* Page, D.: *Development Regions, Growth Points and Service Centres for the Ciskei*. Institute for Planning Research, University of Stellenbosch. 1976.

3. PHYSICAL FEATURES

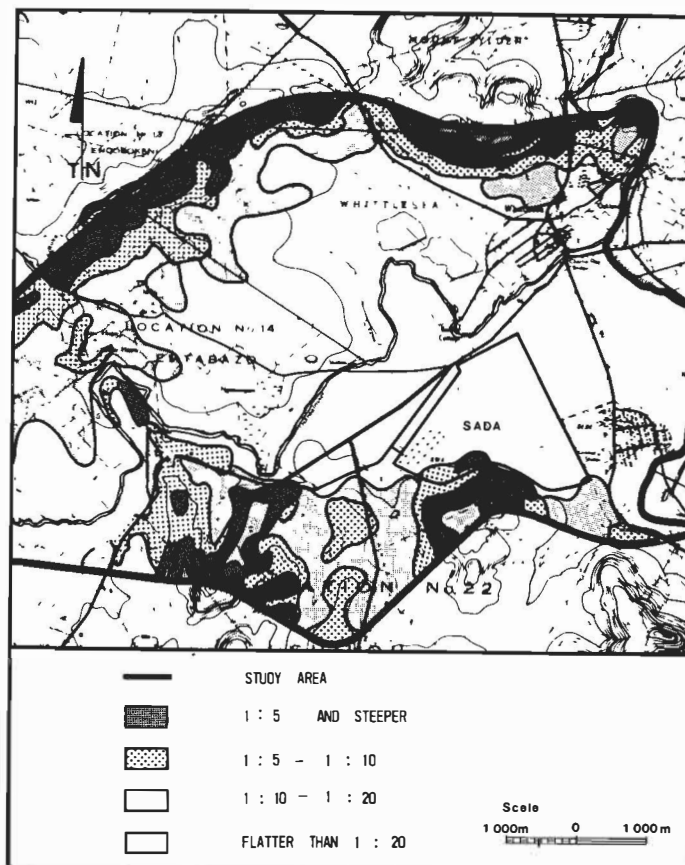
3.1. Geology and soil conditions

The geological formations of the development area are of the Karoo system. The main formation is sandstone of the Beaufort series. The sandstone is well intruded with dolomite. Thin dykes as well as larger intrusions occur. The latter are observable as mountains which surround the area. Alluvial deposits occur in the lower parts of the area. Although sandstone formations are usually safe for building development, careful consideration should be given to stormwater drainage and road construction because certain soils occurring on these formations are known to be highly erodable.

3.2. Topography

The development area lies between 1000 and 2000 metres above sea-level. The area comprises part of a natural basin bordered in the north, west and south by mountains and in the east by the Klipplaat river. The Oxkraal river flows through the area from south-west to north-east. The slope of the largest part of the study area as shown in *Figure 1* is flatter than 1:20, but steeper than 1:120 and would therefore cause no problems in regard to urban development.

Figure 1: SADA-WHITTLESEA SLOPE ANALYSIS



3.3. Climate

The average annual rainfall is 486 mm, of which 77% occurs in the summer months. The temperature is moderate, with December, January and February the hottest months and June, July and August the coldest months. The prevailing wind is north-westerly in the winter and south-easterly in the summer. In general, the climate can be described as a semi-arid temperate climate which may be suitable as a living environment but too dry for dry-land cultivation.

3.4. Hydrology

A detailed report of the hydrology of the study area is being prepared. According to the report referred to under paragraph 1., no problems as far as water for urban development is concerned, are expected.

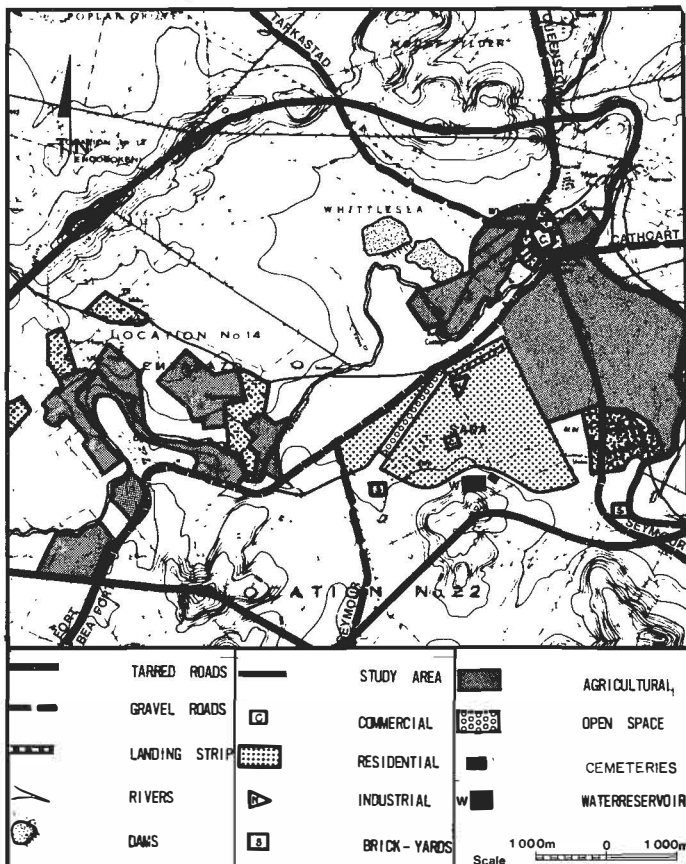
4. THE PRESENT LAND USE PATTERN

Existing land uses and infrastructure are shown in *Figure 2*.

Whittlesea township consists of 180 erven of which only 21 residential erven are developed, whilst there are two residential units, each containing about 1 000 dwellings at Sada. In addition there are some scattered settlements of a few hundred dwellings in the surrounding area. The total urban population was 10 600 in 1970. The population is served by a full complement of government services at Whittlesea as well as medical services at both Sada and Whittlesea. Although there are a few shops in Sada and Whittlesea, the more important commercial services are located in Queenstown some 30 km to the north. Industry is still limited to five undertakings, of the textile types, at Sada.

There are no mining activities near Sada-Whittlesea and the development area has no known mining potential.

Figure 2: SADA-WHITTLESEA INFRASTRUCTURE AND LAND USE.



As far as agriculture is concerned, the dominant soil type in the vicinity of Sada-Whittlesea is largely suitable for extensive grazing only. At the Shiloh Mission 372 hectares of high potential agricultural land south of Whittlesea and east of Sada is under irrigation from the Waterdown Dam.

5. SERVICES

There is no electric power at Sada-Whittlesea but electricity will be available by the end of 1978. Water for domestic use in Sada is presently obtained from the Waterdown Dam. In Whittlesea water is still obtained from private boreholes.

At the present time septic tanks and pit latrines are still used.

6. LAND TENURE

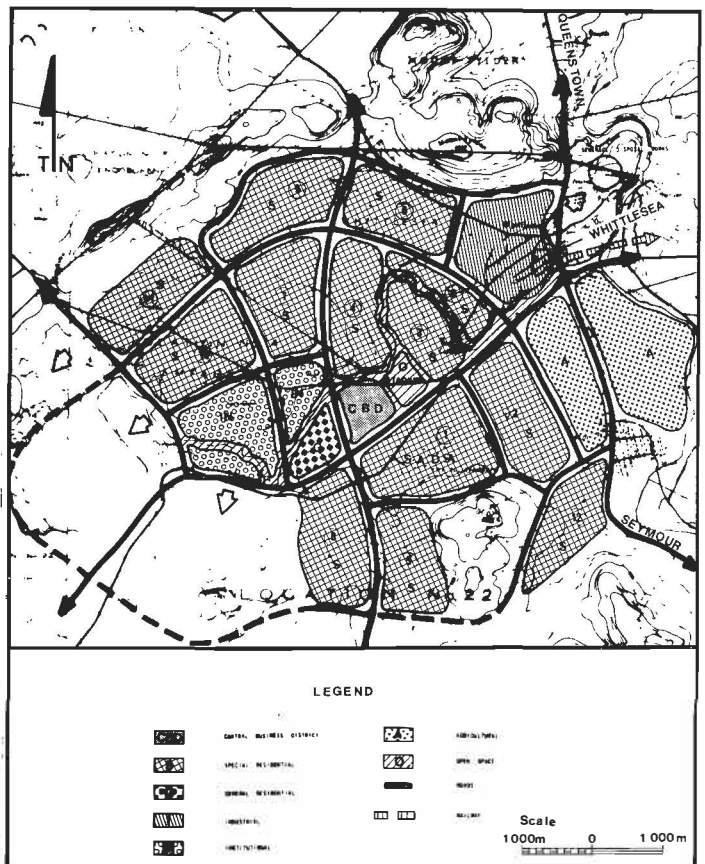
Land for township development is more readily obtainable from a body such as the South African Bantu Trust, than from private people or tribes. Tribal land is the most difficult to obtain.

When land is proclaimed as tribal land, the Ciskei Government Service have to negotiate with the tribes concerned to acquire the land for township-development purposes. In the development area a considerable amount of Trust land will be available and cognizance will have to be taken of land ownership in the planning of the development, particularly in regard to the more urgent requirements.

7. THE GUIDE PLAN (*Figure 3*)

The creation of employment at Sada-Whittlesea is of prime importance for the development of the township. A link with the Queenstown-East London railway line should therefore be given

Figure 3: SADA-WHITTLESEA GUIDE PLAN.



high priority if industrial development is to be encouraged. The projected population for this regional centre is 103 700 for the year 2025. It was decided to draw up the plan for this target population and to make provision for future expansion.

It was decided to unite the two existing townships in order to create a nodal structure of communications and administration and to minimize development costs in the initial stages. In this manner new additions would be integrated with existing development in a central functional core. Development would spread out gradually to the perimeter. The standard presently accepted for the total urban requirements is about 220 ha per 10 000 population. The total requirements for Sada-Whittlesea would therefore be about 2 280 ha for the year 2025.

7.1. The residential function

Each residential unit has been designed to contain approximately 10 000 persons. Units require an area of about 180 ha on a flat terrain and up to 220 ha if the terrain is very steep. The ground on which residential units are to be sited will not be steeper than 1 in 5 and preferably not flatter than 1 in 200.

Each unit is a relatively independent entity and satisfies almost all its own daily needs. The more specialised commodities can be obtained from the C.B.D. Where possible, each unit is situated within one drainage area to facilitate the provision of sewerage and stormwater reticulation. Swampy land and areas subject to flooding or subsidence have been avoided.

The major roads have been designed in such a manner that they give definition to residential units and protect them from through traffic, but at the same time provide easy access for each of the central functions such as the C.D.B.D., sports fields, administrative offices, hospital and industries. Units themselves have been designed for internal circulation by a local road system which will encourage pedestrian and bicycle traffic.

An area (approximately 60 ha in extent) for high density residential development has been provided in close proximity to the C.B.D. and other social amenities.

The residential units are numbered according to the desired sequence of development.

7.2. The Central Business District (C.B.D.)

A standard of 5 ha per 10 000 persons has been used for the C.B.D. The commercial function is provided on a site of approximately 70 ha situated conveniently to existing as well as future development. It is well served by major roads and a collector parkstrip by means of which it is linked with all the components of the town.

The administrative functions, including local and central government, are also integrated with the C.B.D. Administrative functions requiring large areas and which are not in constant use have been located with the institutional services in peripheral positions.

7.3. Industries

With a standard of 17,3 ha per 10 000 persons, the required industrial area will be 180 ha by the year 2025.

The dominant wind directions at Sada-Whittlesea are south-east and north-east. In order to prevent air pollution of the town, the industrial area should be located in the north-easterly or south-westerly parts of the town. Due to catabatic air flow, the industrial area should be situated in the lower lying parts of the study area.

Industrial land has been provided in the north-east corner of the development area because of prevailing wind, ground slope and because it is the area nearest to the Queenstown-East London

railway line, from where the railway will most probably be constructed. The area is approximately 200 ha in extent. Heavy and rail-served industries will be accommodated in the eastern part of the industrial area. Light and service industries, which are not detrimental to adjoining residential area, as well as a technical or vocational training centre, will be accommodated in the western part.

7.4. Institutional services

It is difficult to determine in advance the area needed for institutions. From previous experience, an area of about 18,4 ha per 10 000 people is taken as standard. According to this standard an area of 190 ha will be required for institutional purposes by the year 2025.

Three sites with a total area of approximately 240 ha have been provided for institutional purposes. These sites are well served with collector roads and parkstrips for pedestrian and cyclist patronage. It forms the functional core of the town, together with the C.B.D. and the stadium.

7.5. Transportation

Because of the topography which is in part responsible for the existing road system, it will be impossible to avoid a through-traffic in Sada-Whittlesea in the initial stages of development.

The road system was designed with simplicity, safety and effectiveness in mind. The external communications with Queenstown, Seymour and East London were considered of major importance, whilst all the present regional connections were retained because of its relative effectiveness in linking the hinterland with Sada-Whittlesea.

The road system consists of two major traffic routes that intersect at the town centre and a ring road that intersects these major routes. One of the major routes intersecting at the town centre, is extended eastward in the direction of the national road approximately 28 km directly east of Sada-Whittlesea.

The transportation plan for Sada-Whittlesea was drawn up to satisfy the local and regional needs. It is suggested that a detailed traffic study for the northern Ciskei be undertaken.

A rail link is also shown directly to the east, but the final route would be determined by the South African Railways.

No airport is proposed. In the event of an airport being required in the future, a suitable site could be selected.

7.6. Open space

A minimum of 13 ha open space per 10 000 persons is required. Open space includes a stadium, sport area, parks and green belts. The open space is easily accessible from the residential area. A system of green belts is proposed to encourage and facilitate safe pedestrian traffic. The minimum open space required in the year 2025 will be 135 ha. The stadium and sport area have been located on a flat terrain, 35 ha in extent, east of the C.B.D., so that the parking facilities could be commonly used.

A parkstrip is provided on either side of the Oukraal river. This parkstrip links all the non-residential functional areas as well as certain residential units.

All the residential units would be linked with this collector parkstrip by means of a natural or artificial parkstrips, resulting in an integrated system of parkstrips. Pedestrian and cyclists patronage of all uses are encouraged in this manner. A fairly large of land, 372 ha in extent, comprising the Shiloh Irrigation Scheme in the eastern part of the study area, is reserved for agricultural purposes at the request of the Ciskeian Government.