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Integration of the peripheral community: defining fractured urbanism in Grahamstown

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CHAPTER

03

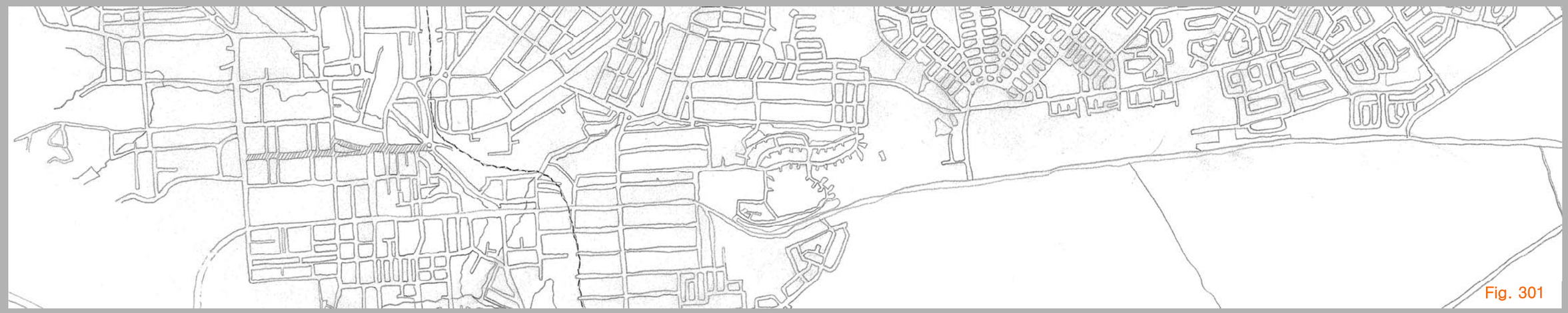


Fig. 301

Drawing by: The Author, HB Pencil on Tracing Paper

Analysis

3.1 Method of the Study

The study started with a basic exploration of towns and cities throughout South Africa. I examined many small towns and large cities on “Google Earth”. The main problem that we are facing seemed to me to be the separate development, culturally and economically, within towns and cities in South Africa. This statement might seem obvious, due to our history of separate development, with colonial urban development (King, 1976) and apartheid restructuring of the 1950’s. It is a very complicated “separateness” though, and there is more to this separation than meets the eye.

Once the study gathered momentum, I realised the separation between the old colonial towns and townships of the Eastern Cape had very similar characteristics. The study was narrowed down to towns located mostly in the Makana municipality of the Cacadu district, Eastern Cape. My focus shifted from large cities with complex polycentric layouts to inland towns in mainly rural areas, which were designed around a central area. It was finally decided that Grahamstown and Graaff Reinet would be compared to determine similarities in layout and design. It was within these similarities that two theories started to surface. The first was that the layout of these towns was initiated by colonial settlers as military garrisons and civil stations, further supported by 1820 Settlers, in an attempt to secure the Eastern Frontier against the Xhosa nation. Secondly, was the theory of modernist planning used by the Nationalist government to propagate their restructuring of towns and cities through the group areas act of 1950 to 1970, where they physically marginalised cultural groupings along racial divides by moving Black, Coloured and Asian people to the periphery of cities and towns in South Africa.

These two theories would form the basis of the research, and would determine the focus of the study. Reference (King, 1976) and (Davenport, 1980)

The method can be broken down into the following parts:

- Research historical, Understanding the impact of colonial urban development and apartheid restructuring
- Research current, Understanding the current layout and urban form of Grahamstown
- Field work, in the form of site visits, photo analysis.
- The study of sustainable mass-urbanisation
- The study of existing frameworks in Grahamstown
- Geographic study / Topographic study
- Research into the demographics of the area, this would also include historical demographics
- Site Analysis
- Study of Vacant Space infill
- Understanding the Limits to Growth, from a sustainability point of view, in the new world Paradigm of Sustainable Developments.
- Exploratory drawings and tracings of maps, to create base information to work from.
- Simulations of various design scenarios.
- Design proposal based on research
- Design proposal stripped down
- Study of the stakeholders and decision makers
- Understanding and study of the social indicators in the area.

The study consisted of two site visits over the period of the research, and one site visit during the design phase of the study.

Fieldwork included, photographs, visual analysis and meetings with council, to try and gain base information.

The research led me to three reports already discussed in detail in the Literature Review, chapter 2 of the study, so I will just mention them in passing:

1. Living in Grahamstown East/Rini: A social indicators report, is a very detailed survey done in 1999 by Moller, in East Grhamstown, this study relied heavily on Information gained from this survey.
2. An economic and conditions analysis of public urban green spaces in Grahamstown, Eastern Cape. By Shackleton in 2011. This study on green spaces in Grahamstown has influenced the decision to focus on moving and consolidating open space to get better use from them and to ease maintenance.
3. Grahamstown: A Pilot Study In Conservation. This study was done by Gledhii et el in 1975 and informed much of the understanding of the early history of Grahamstown. It gave a clear record of how the urban layout of Grahamstown came about.

Although community participation is delimited from this study, a feel for the community and the people living and using the city on a daily basis was invaluable to this study. Their stories and humanity was the fuel on which the study sustained itself. Some short stories of the daily lives of these people have been included in the study.

The study also made use of stories and accounts of life in and around Grahamstown.

The aim of this study was to understand the impact of colonial development and apartheid restructuring on Grahamstown, both good and bad. Colonial development has brought many good things to towns in South Africa, and we still reap the benefits today. Therefore both apartheid and colonial design is studied with an open mind.

3.2 Photo Analysis

Fig. 302



A. Clock tower main building Rhodes University Campus. Designed by Sir. Herbert Baker. (Fig. 302)

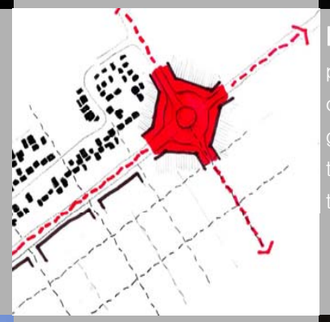


Fig. 303



B. The Drostdy Arch at the pedestrian entrance to Rhodes University. In the background is High street with the Cathedral at its termination. (Fig.301)

Fig. 304



C. The angel of peace, commemorating the dead of the "Boer War" 1899-1902. Situated on the intersection of Bathurst and High street, diagonally across from the Methodist church of Grahamstown. (Fig.304)



Fig. 305



D. Houses in the colonial part of town built right on the Erf boundary, with less than a meter sidewalk and then the street. (Fig.305)

Fig. 306



E. View looking down High street towards the entrance of the Cathedral.



Fig. 307



F. View of the Cathedral spire from High Street, south of Cathedral.

Fig. 308



G. Grahamstown City Hall & Settlers Memorial Tower. The City hall is situated towards the tapering end of Church Square. (Fig.308)

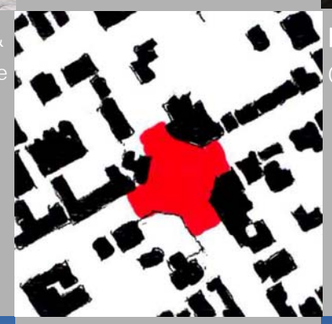


Fig. 309



H. St. Andrews School Grahamstown. (Fig.309)

Fig. 310



I. View towards the west, looking up High street towards Cathedral Square. (Fig.310)

Fig. 311



J. Het Waren Huis in Grhamstown, built in 1888

(Fig.311)

Fig. 312



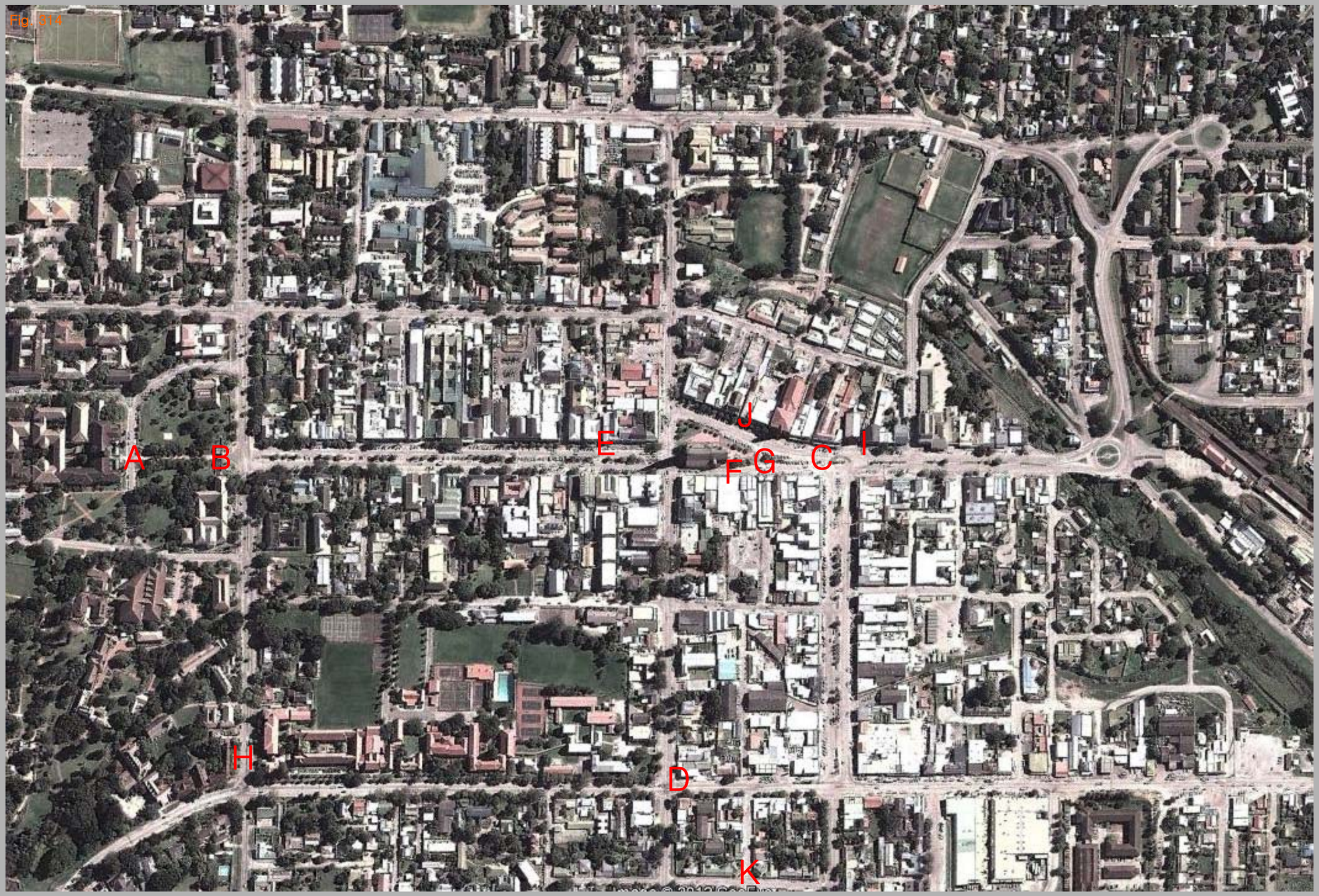
K. Artisan square. Houses on intersection respecting a 45 degree angle on the corners, creating a square in a residential minor road.

Fig. 313



Photos By: Arthur Messaris

Fig. 314



Aerial Photograph of Grahamstown supplied by National Geo-Spatial Information

Fig. 315



A. Cows being led up a hill on gravel roadin Rini (Grahamstown East) (fig315)

Fig. 316



B. Cash shop in Joza Location. Brick structure, plastered with front entrance facing the gravel road. (fig316)

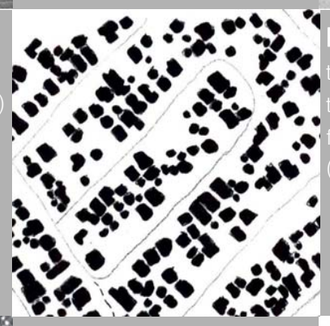


Fig. 317



C. Temporary house, typical of the houses supplied by national government in the 70's and 80's to alleviate the housing shortage in the townships of Grahamstown. This is a house in the so called "Silvertown"(fig317)

Fig. 318



D. RDP houses in extension 8, built after 1994.(fig318)

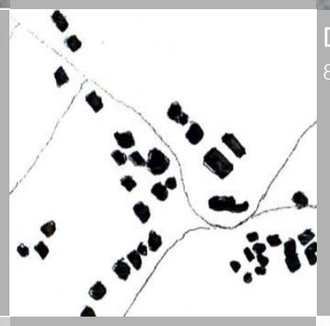


Fig. 319



E. Research shows that more than 50% of people in Rini, grow vegetables as a source of food security. (fig319)



Fig. 320



F. Informal housing on the outskirts of Extension 6. A large number of household have live stock, and keep them at their informal houses. Allotments have been set aside by council. There is evidence that these allotments are not managed effectively.(fig320)

Fig. 321



G. According to research (Moller, 2001) the 4 roomed houses shown above in ext.6 was built to cater for Rhodes University staff. (fig321)



Fig. 322



H. Kids in the township. (fig322)

Fig. 323



I. Abject poverty has not totally destroyed the sense of community. People in Rini live on the streets and play an active role in their immediate community.(fig323)

Fig. 324



J. The picture to the left shows gate to house built on an old cemetery in the 1960's. The cemetery had to make space due to the dire housing shortage at the time. We are now in a similar situation. Housing shortages have reached a crisis.

Fig. 325



K. Picture to the left shows a traditional structure under construction in East Grahamstown. (fig 325)

Fig. 326



All the Photos above from : (Moller, 2001)

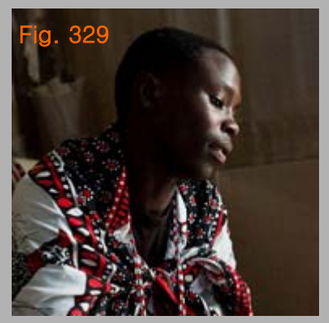
Fig. 327



Aerial Photograph of Grahamstown supplied by: National Geo-Spatial Information



A. Thuthuzi is a musician and lives in Rini. He shares a 2 bedroom house with his parents. (Fig.328)



B. Lukhanyo Antoni 19, lives with his mother and younger sister. He under-went a tribal ritual, that fills him with powerful spirits to protect him. He lives in Extension 8. (Fig 329)



C. Mlunguseli Chaki earns his income, from running a donkey cart that collects wood for burning and building in the township. When the donkeys are not working they graze free in the township.(Fig.330)



D. Nowandile Ngezana's is a church goer and at-tends the Church of Zion. She recently lost her sister and is grieving the loss. (Fig.331)



E.12 year old Mandelakhe lives at the Eluxolweni shelter away from his mother. It is too dangerous for him to live at home. His mother is a drunk. When he goes home he often gets abused. (Fig. 332)



F. When young Xhosa men turn 18 they go through initiation. The spend a month in the veld across the main road (East Common-age) and they are circumcised. Asanda Ncwadi in the picture above has recently been initi-ated. (Fig.333)



G. Elizabeth Sintim is from Ghana and runs her own hair salon in Grahamstown. She is here on an asylum seeking per-mit. She has a 2 year old daughter and came to South Africa because she could not find work in Ghana.(Fig.334)



H. Johnson Tyelbooi has circumcised over 40 000 young boys in Grahams-town since 1973. He in-herited the occupation from his dad and his not teaching his sons to do the same.(Fig. 335)



I. Asanda Ncwadi lives in Hlalani township Gra-hamstown, and makes an income by printing t-shirts.
He sells the t-shirts with the hand printed images for R 50 a shirt. (Fig.336)



J. Siyanda Antoni 23, makes a typical "African Salad" for dinner. This con-sist of maize meal boiled in water for five minutes. This is the staple of most Xhosa people. (Fig. 337)



K. Tourists visiting the colo-nial part of Grahamstown. (Fig.338)

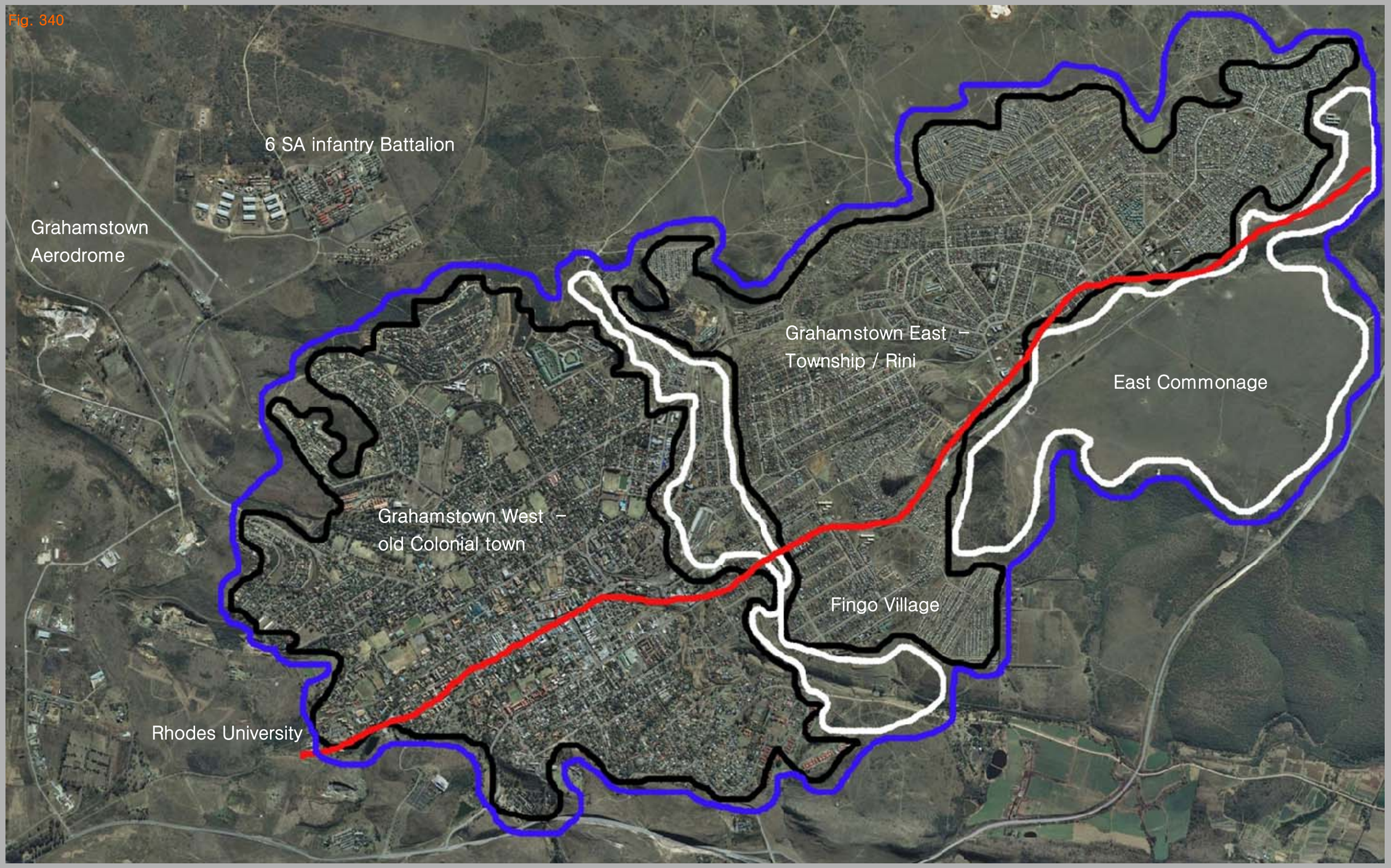
L. Sheep dogs on a farm in the area of Adelaid. Many people work on farms in and around Gra-hamstown.



Photos and Stories by: The World Journalism Project. www. Worldjournalism.syr.edu

3.3 High Level Analysis

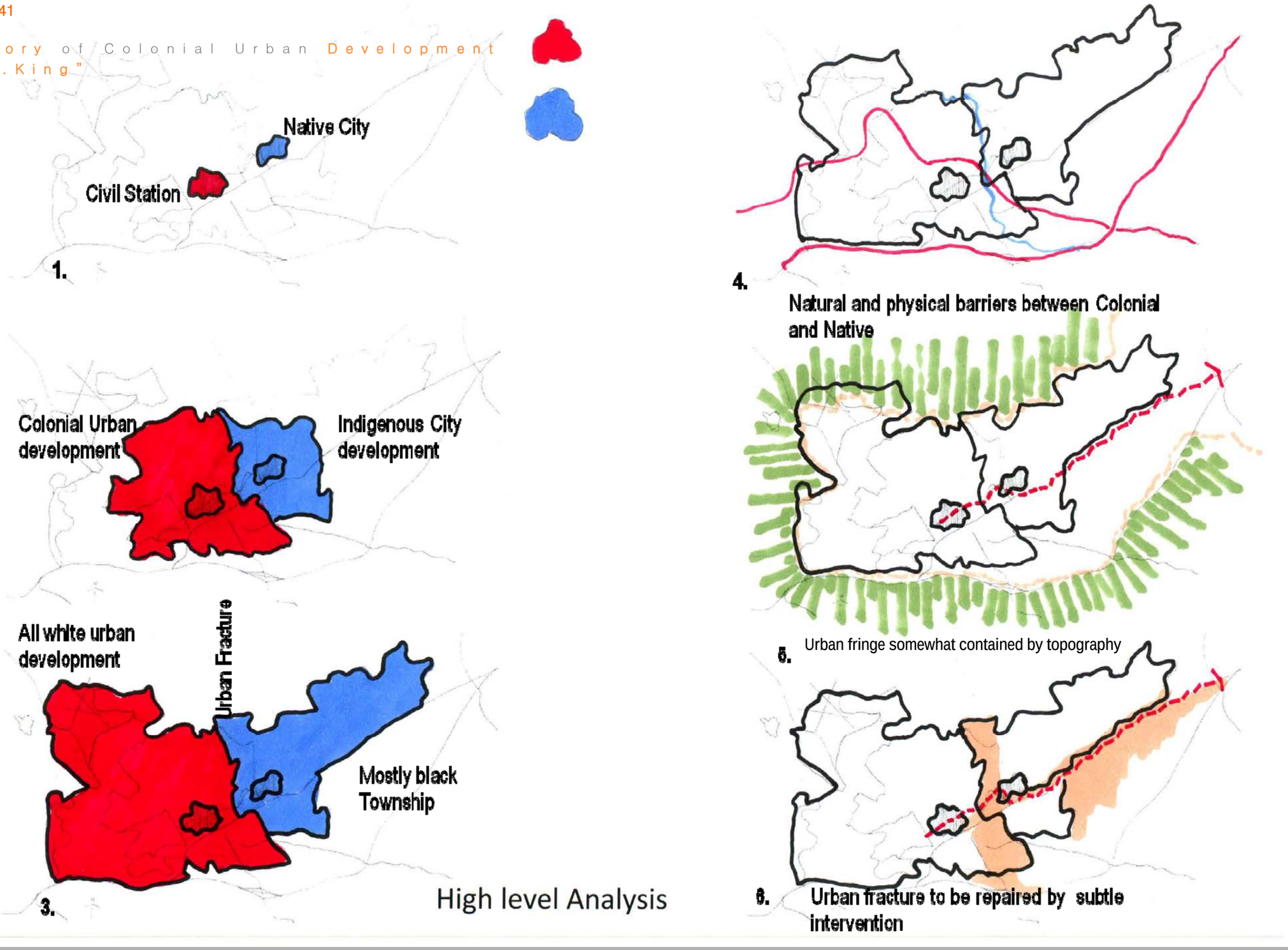
Fig. 340



Aerial Photograph of Grahamstown supplied by: National Geo-Spatial Information

Fig. 341

Theory of Colonial Urban Development
"A.King"



Drawing by: The Author, Pen and Copic marker on 80 gram Paper

3.4 Site Analysis

Although there are a few streams running through the centre of the city the urban environment does not respond well to the water course. Many of the under utilized spaces are close to the water course and flood lines are problematic. The so called “riperian” zone also plays a role. when developing close to these water courses.

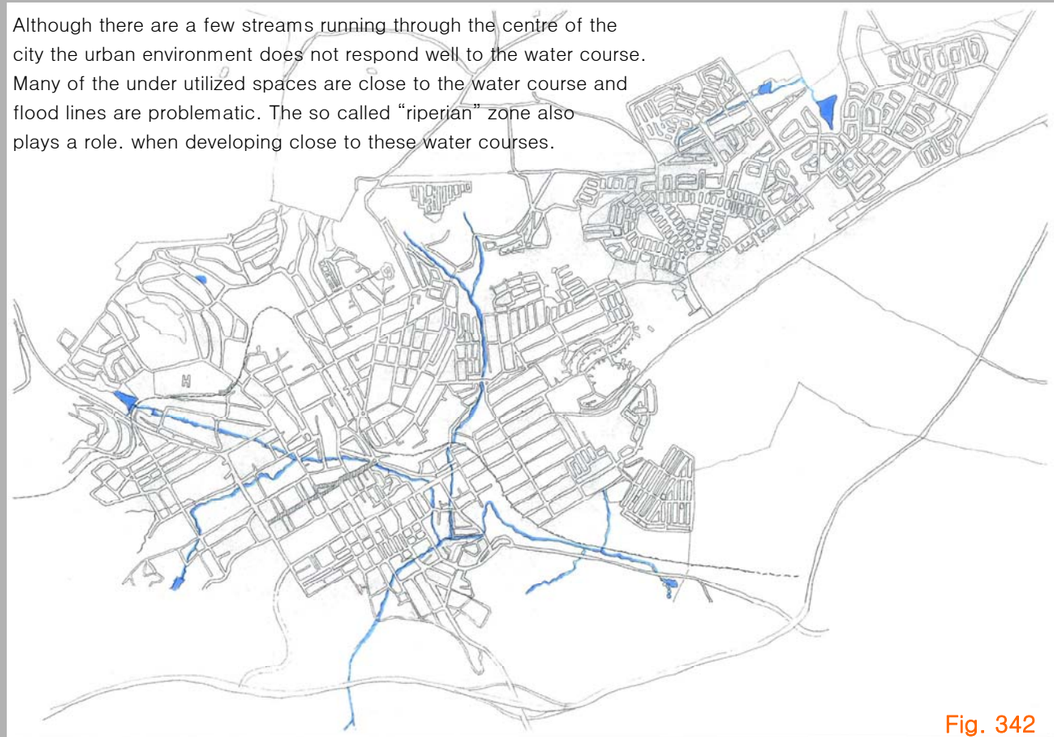


Fig. 342

Grahamstown has many green open spaces or “PUGS” public urban green spaces. These spaces are on the periphery of the old colonial town and spread throughout the townships. Many of these open spaces are not maintained.



Fig. 343

Central to the framework or users guide, will be the unlocking of potential in underutilized land parcels. Some of these land parcels are parks, some are land in private ownership and some are owned by council and local government.

The inner city is dominated by slower vehicular traffic and pedestrians, which include students and people from the townships, who are ferried to town via mini-bus taxi. Raglan road turns into the R67 which is a high speed country road, past the township in East Grahamstown.



Fig. 344

The N2 runs past the city in a east west direction towards the south of the city. Main arterials are indicated in yellow. The now defunct rail runs through the centre of the city dissect-ing it north south.

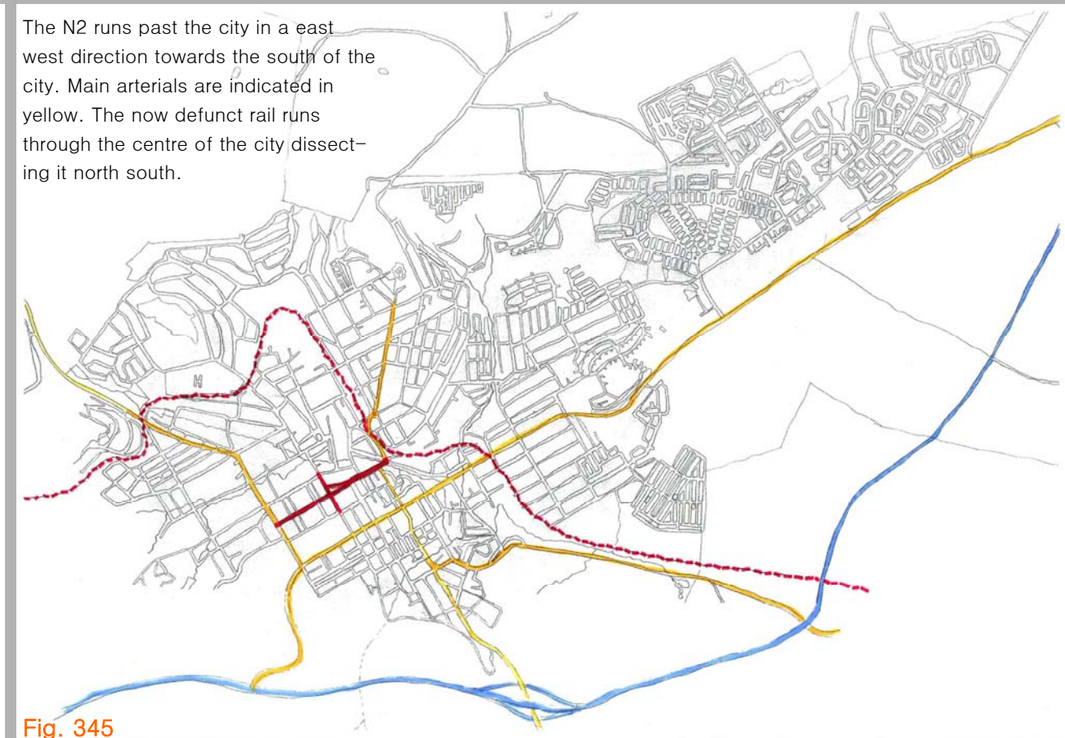


Fig. 345

Drawings by: The Author, HB Pencil on Tracing Paper, colour in Copic marker

Open space plan

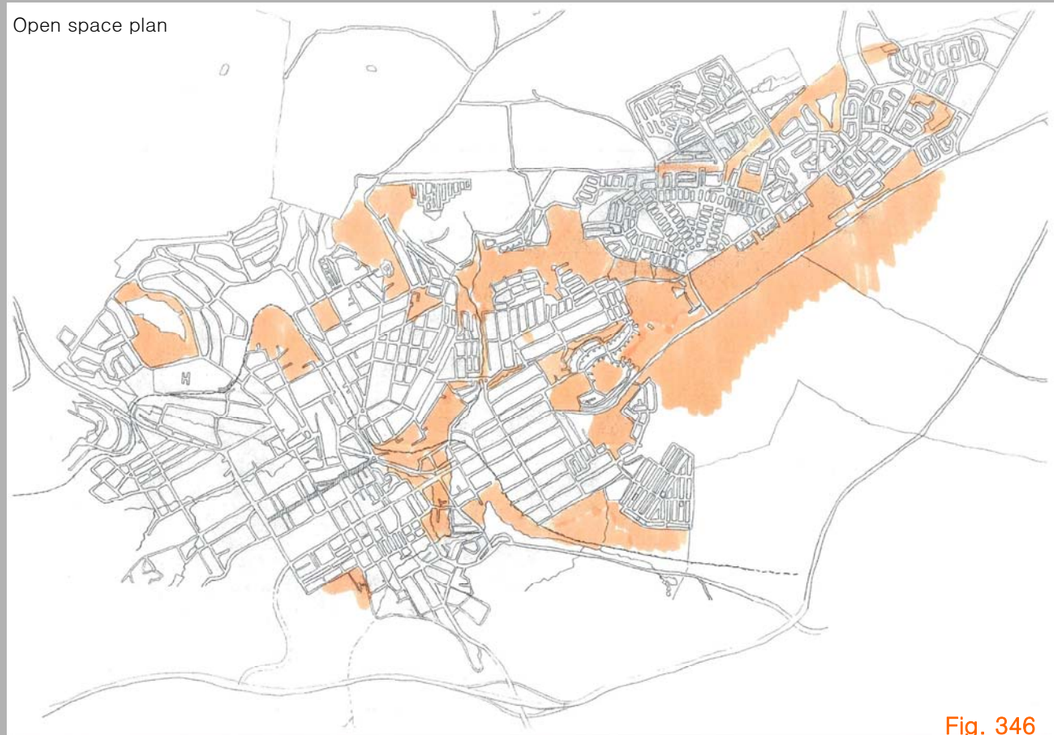


Fig. 346



Grahamstown is world renowned for its educational facilities, which include Rhodes University and a hand full of top private schools. The nearby township has 6 schools of its own. Towards the north of the city is the airfield and the 6 SAI army base, it also houses two large hospitals and a smaller clinic close to the old railway marshalling yard.

Fig. 347

The red line shows the possible introduction of a devel-opment boundary.

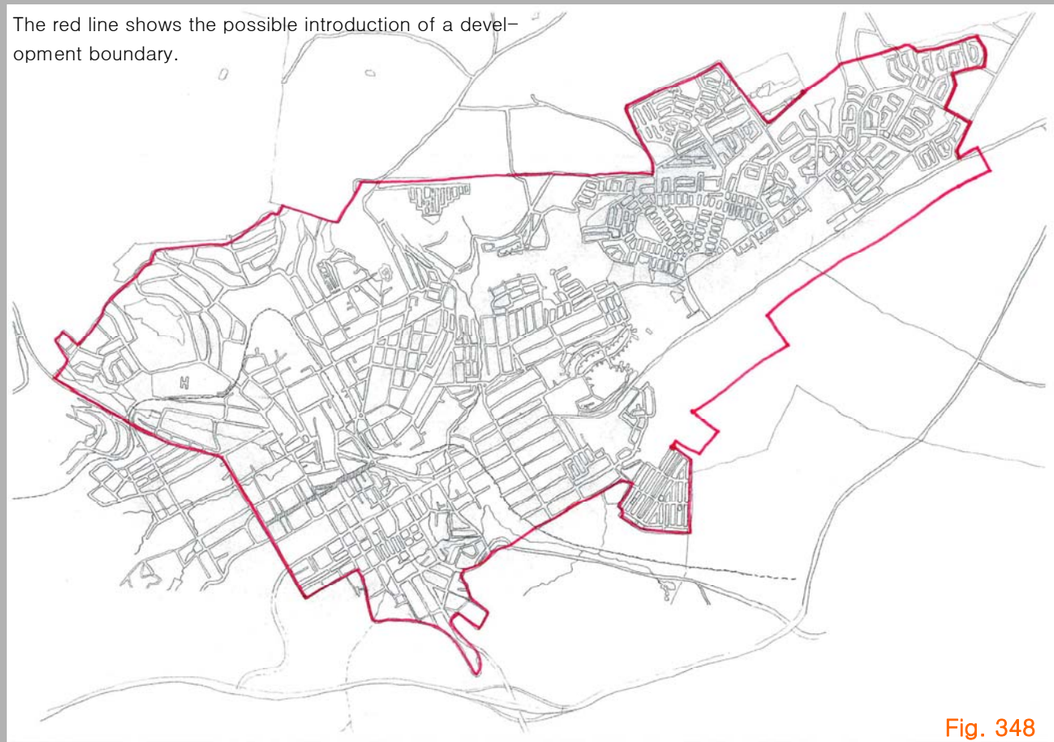


Fig. 348

The map shows basic proposal for infill development in Grahamstown as proposed by local municipality.

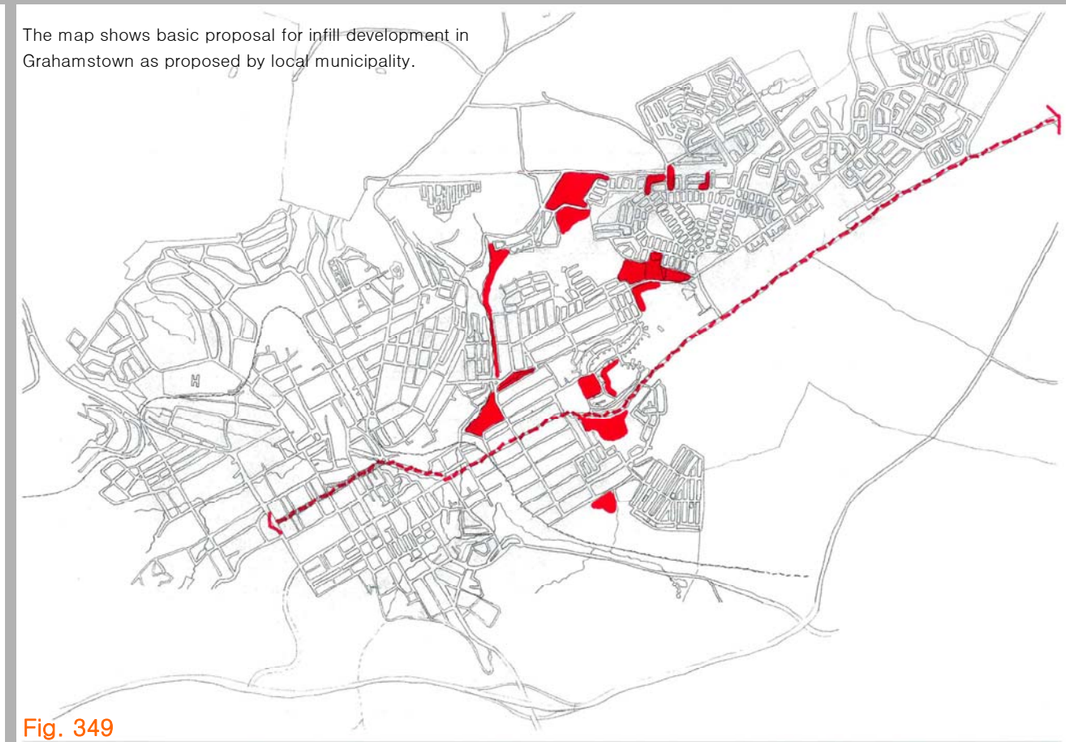


Fig. 349

Drawings by: The Author, HB Pencil on Tracing Paper, colour in Copic marker

By creating an urban development boundary further urban sprawl is restricted. It forces developers to look for available land within these boundaries and encourages infill development achieved through linkages to unlock potential of existing underutilized land parcels.

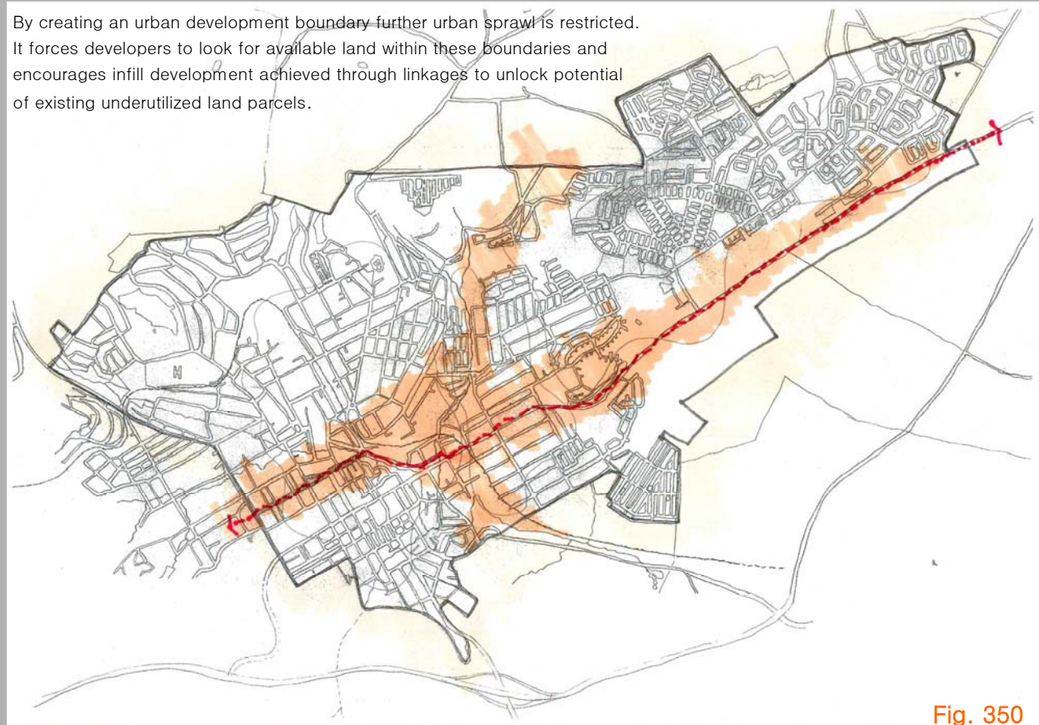


Fig. 350

It is proposed that the spine or corridor along the high street connect down onto Raglan Road and then extends along the R67. This proposal will slow the R67 down to a pedestrian level as apposed to a high speed country road. The main idea with the corridor development is to link East and West Grahamstown across Fingo village and the old railway yard.

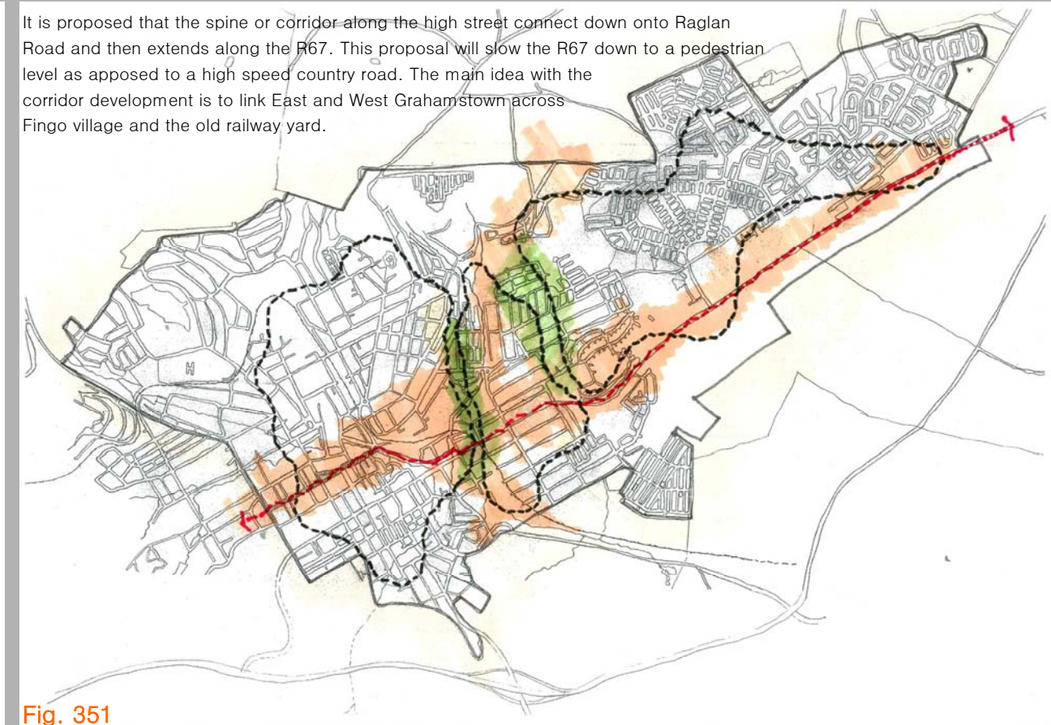


Fig. 351

This map is a synopsis of the proposal by Makana local municipality and indicates in broad terms their intentions for future development upgrading and investment

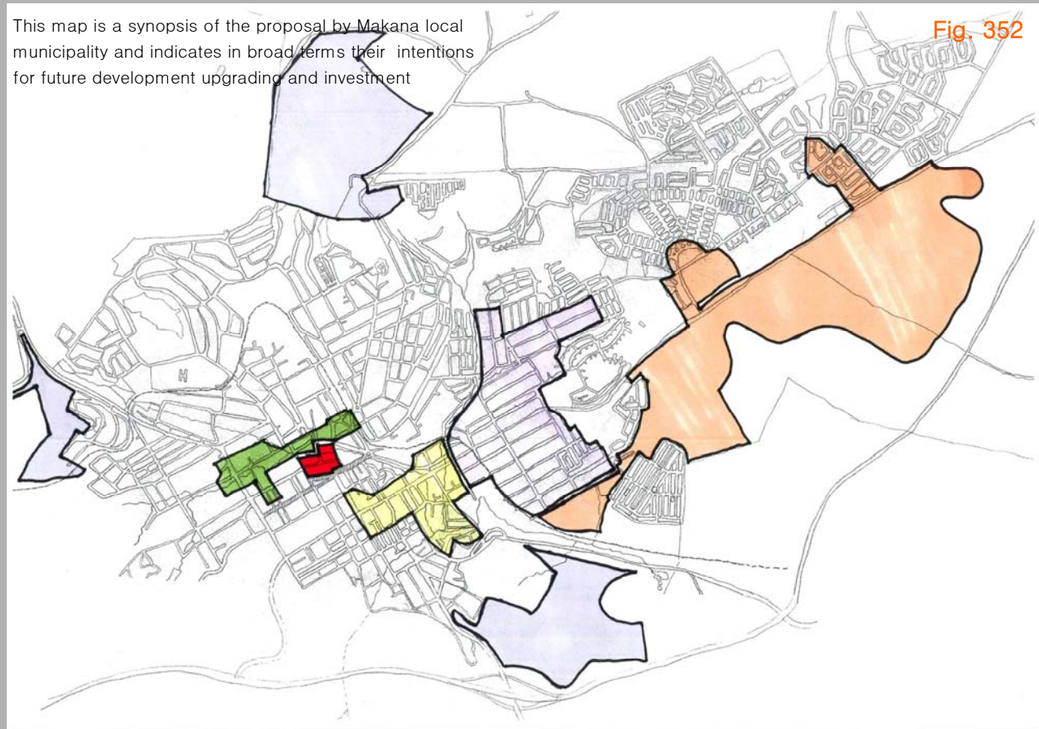


Fig. 352

This maps shows a detailed proposal for infill development making use of under utilized land and open spaces within the urban development framework, in response to the proposal by Makana municipality. The urban development plan looks specifically at linkages between communities previously torn apart by restructuring.

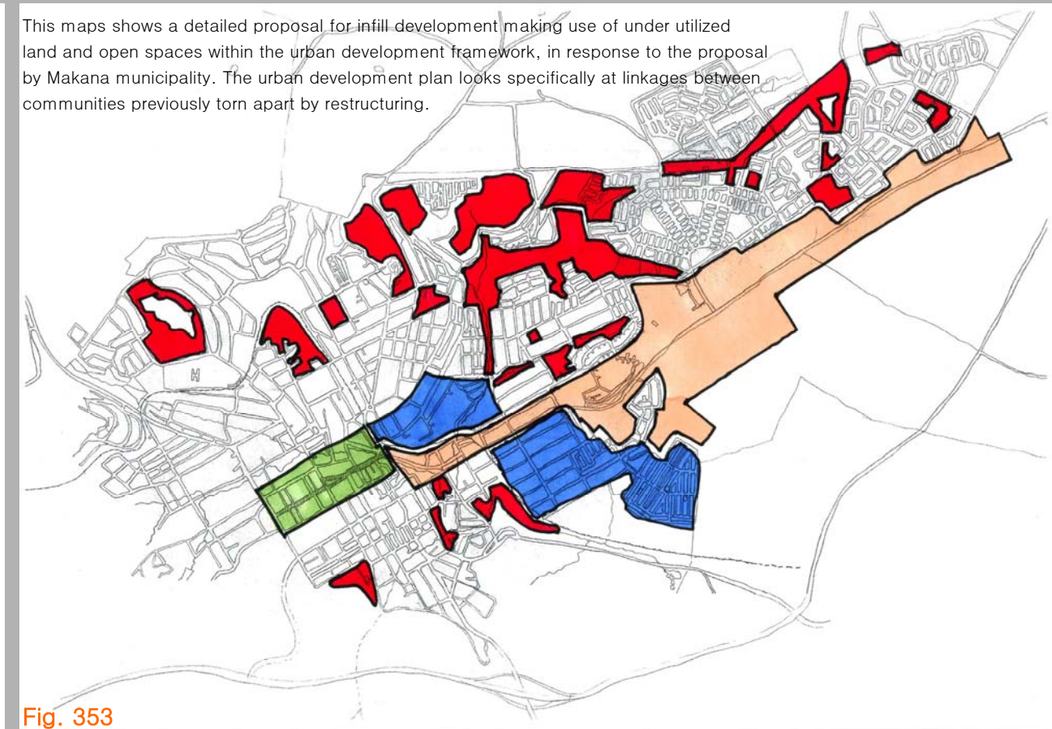


Fig. 353

Drawings by: The Author, HB Pencil on Tracing Paper, colour in Copic marker

New corridor development to link townships.
New road links to unlock potential in vacant land parcels
and link grid system in city.



Fig. 354

Map of Grahamstown

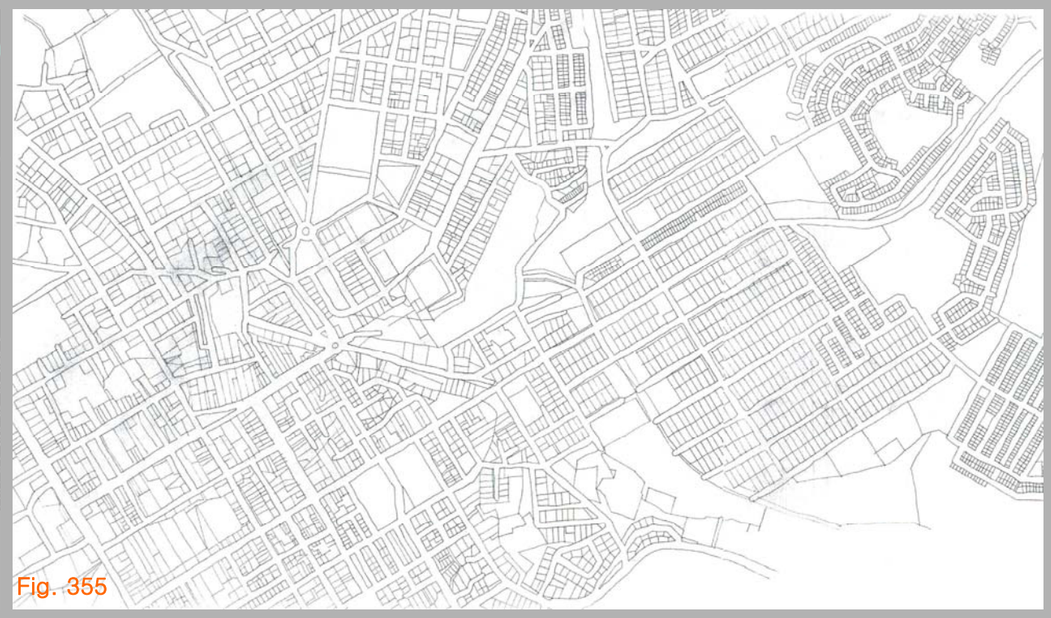


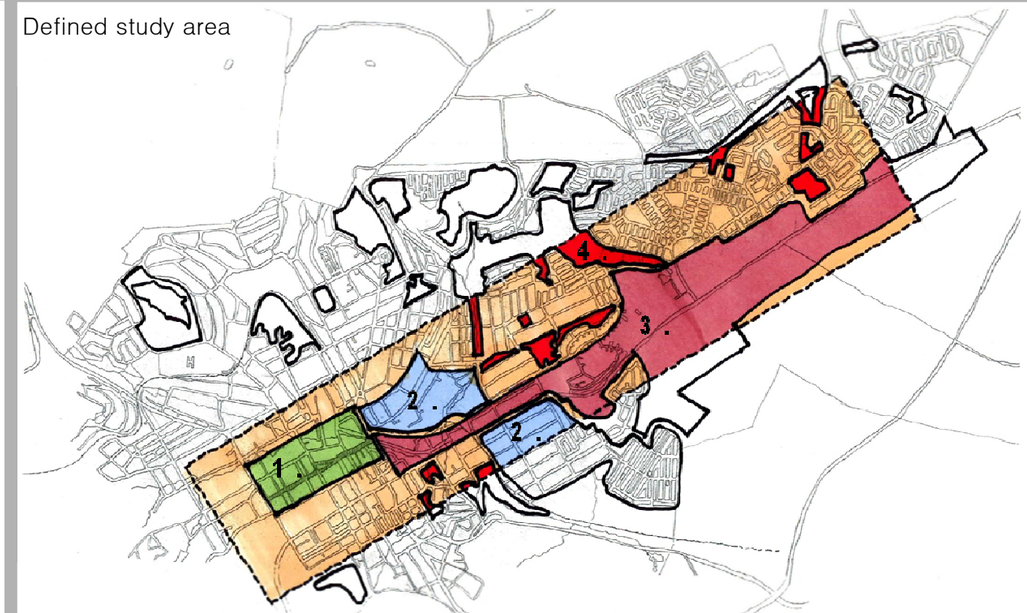
Fig. 355

Fig. 356



1. Original Colonial urban layout.
2. Original infill native city
3. Proposed infill development
4. Proposed corridor development

Defined study area



1. Upgrading of existing urban core
2. Development of new urban corridor to act as link
3. Redevelopment of existing suburban areas to revitalize.
4. Infill development to unlock potential of locked or underutilized land parcels.

Fig. 357

Drawings by: The Author, HB Pencil on Tracing Paper, colour in copic marker

3.5 Existing Urban Framework Grahamstown

Current urban framework for Grahamstown

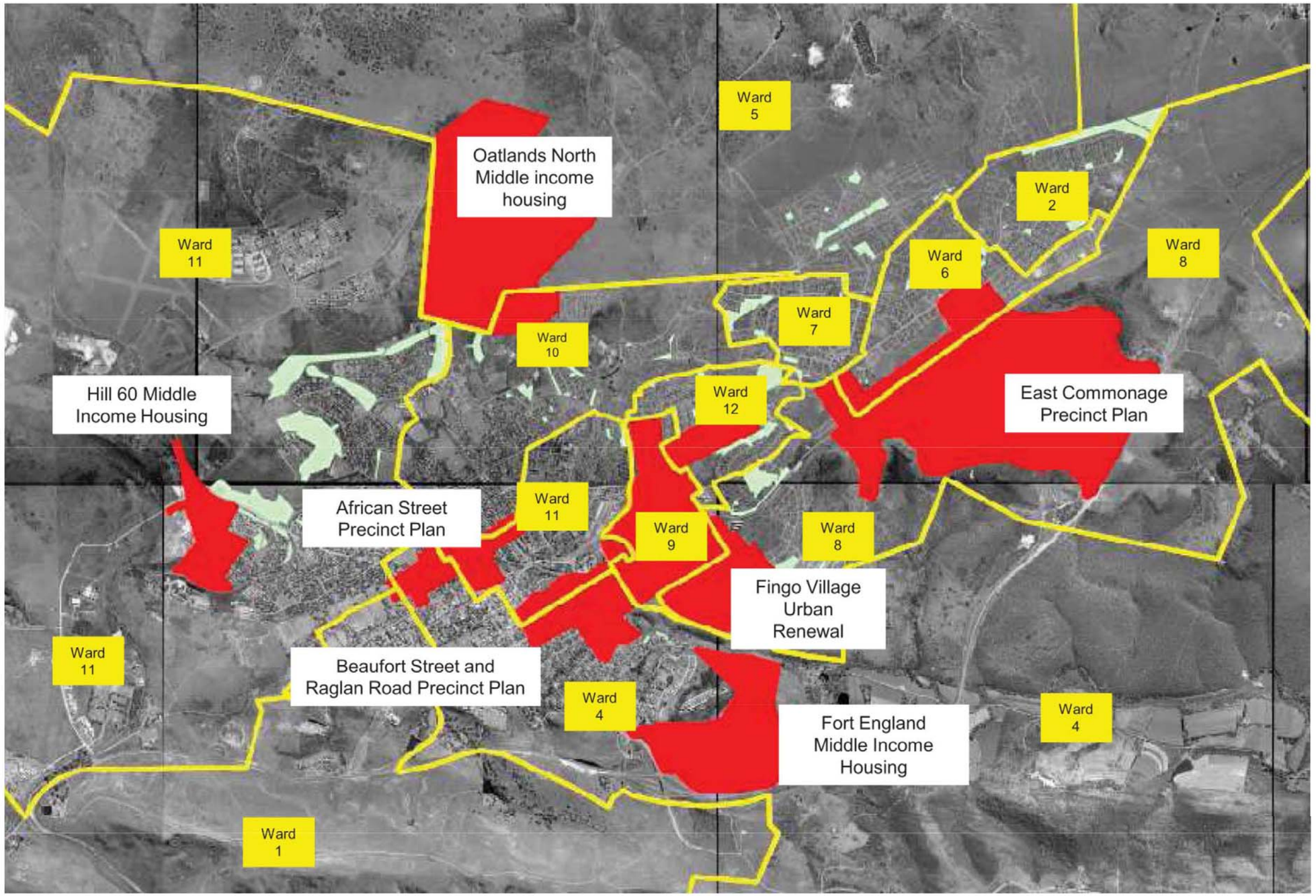


Fig. 358

MAKANA MUNICIPALITY DEVELOPMENT MASTER PLAN

Images taken from: MAKANA MUNICIPALITY DEVELOPMENT MASTER PLAN August 2006

Study of towns in South Africa and their peripheral communities

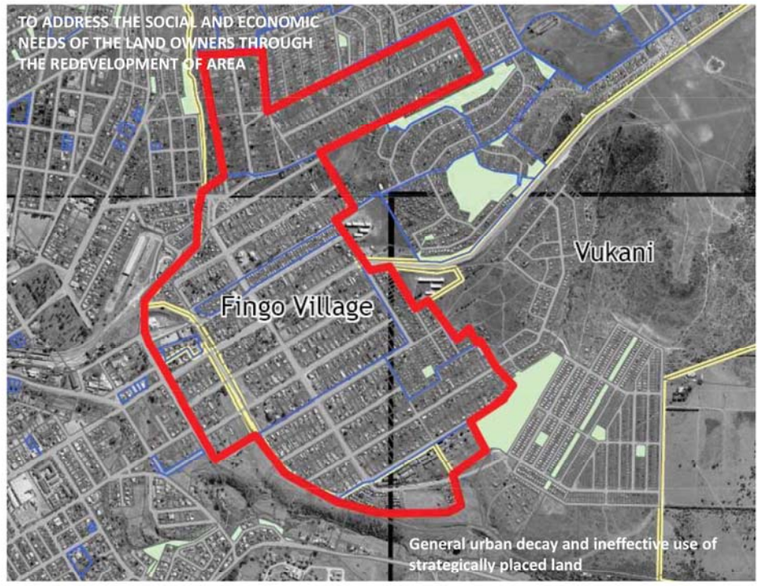


Fig. 359 Fingo Village redevelopment

Study of towns in South Africa and their peripheral communities

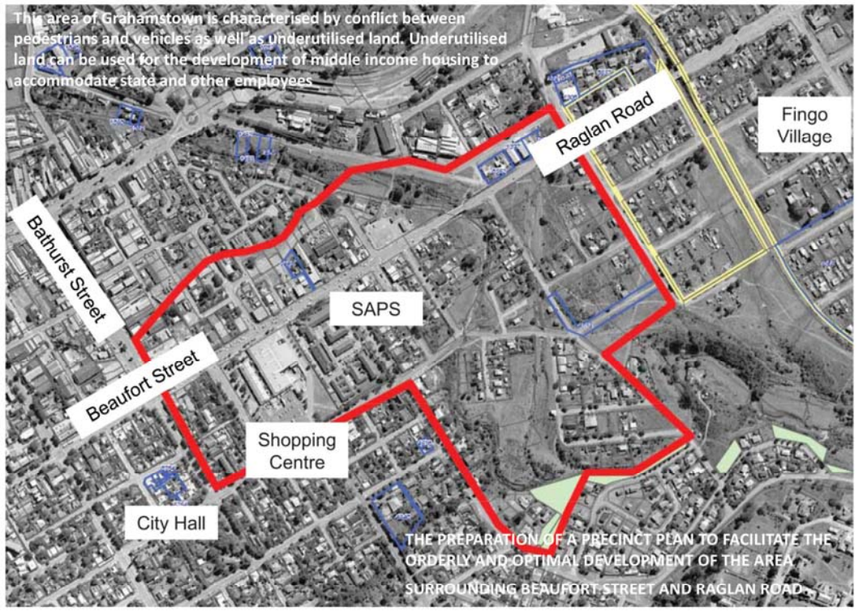


Fig. 360 SAPS precinct redevelopment

Study of towns in South Africa and their peripheral communities

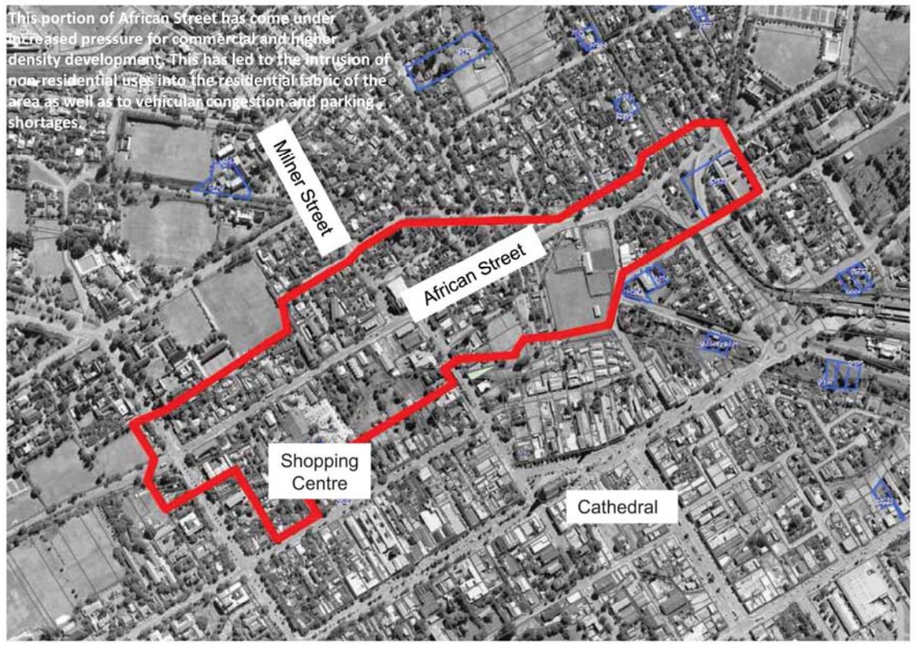


Fig. 361 African street redevelopment

Study of towns in South Africa and their peripheral communities

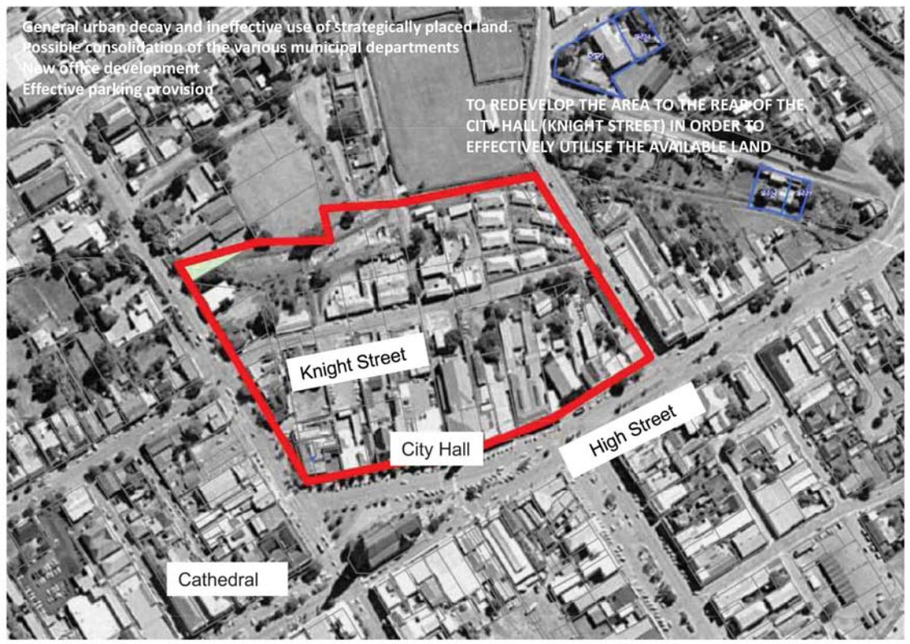


Fig. 362 City Hall redevelopment

Images taken from: MAKANA MUNICIPALITY DEVELOPMENT MASTER PLAN August 2006

Study of towns in South Africa and their peripheral communities

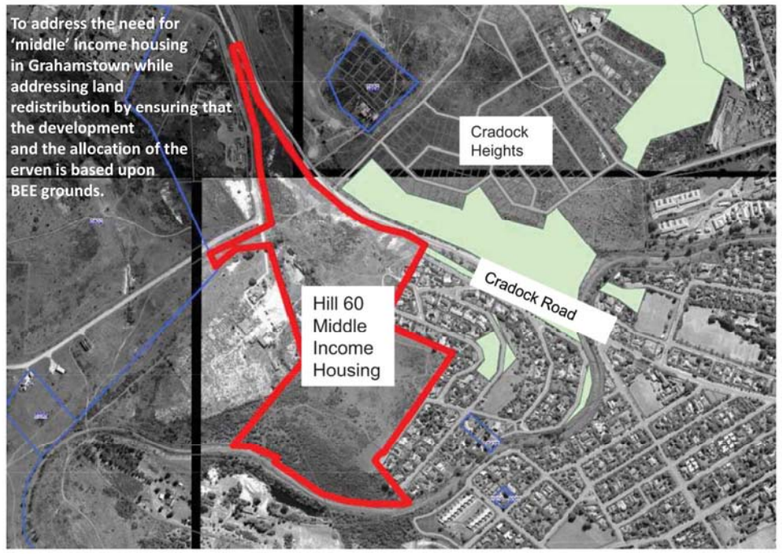


Fig. 363 Hill 60 middle income development

Study of towns in South Africa and their peripheral communities

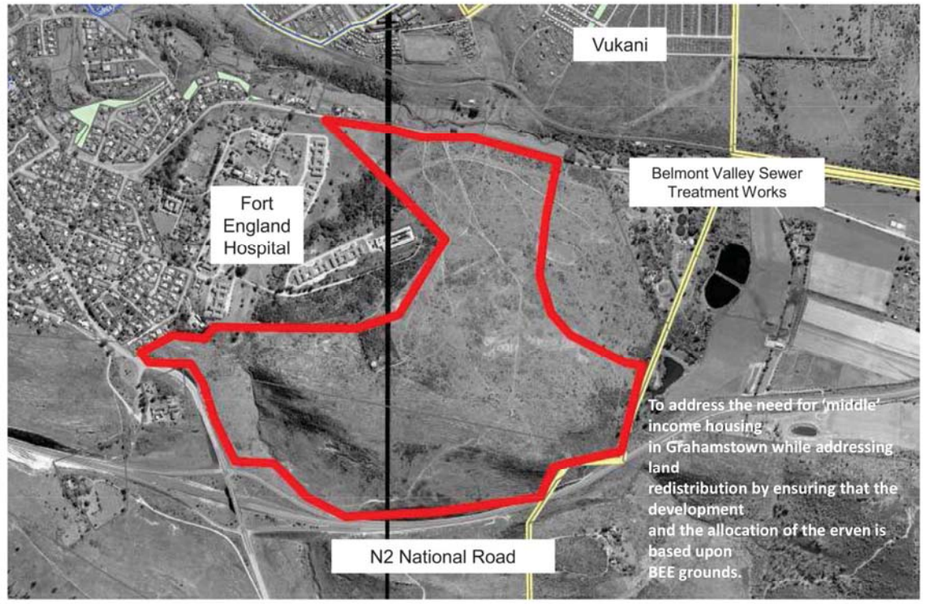


Fig. 364 Fort England middle income housing development

Study of towns in South Africa and their peripheral communities

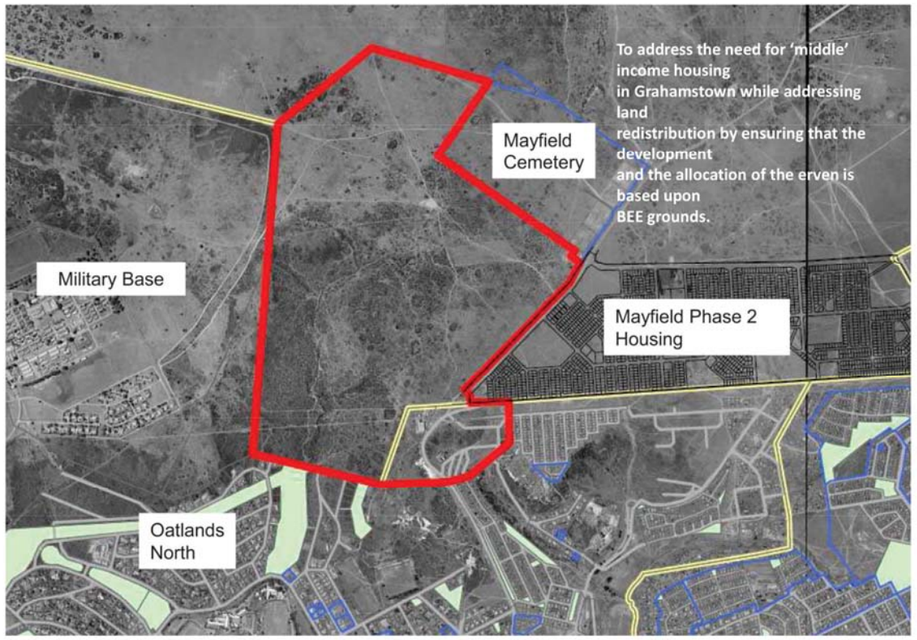


Fig. 365 Oatlands middle Income development

Study of towns in South Africa and their peripheral communities

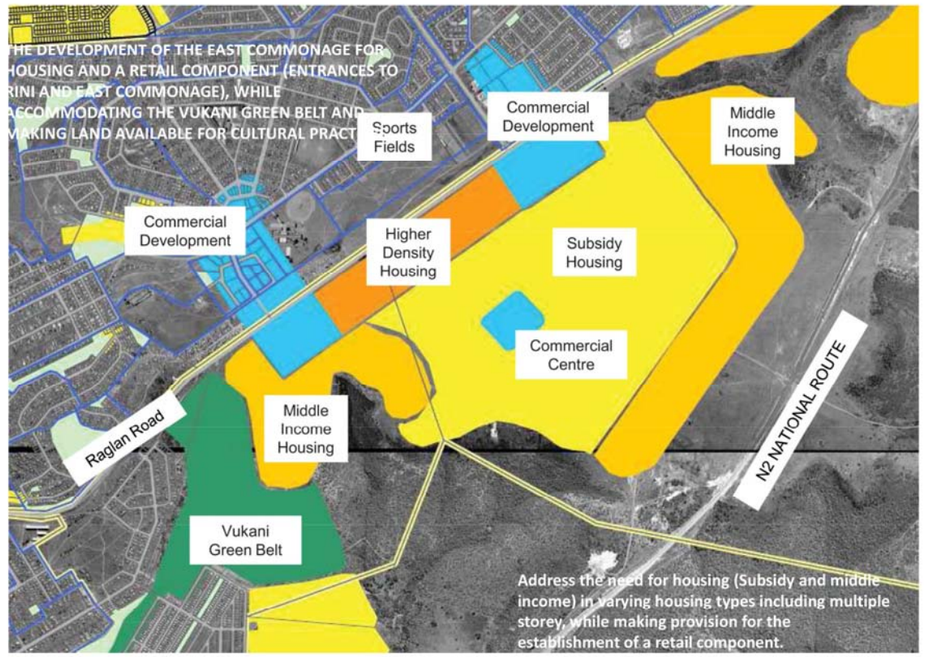


Fig. 366 East commonage precinct plan

Images taken from: MAKANA MUNICIPALITY DEVELOPMENT MASTER PLAN August 2006

3.6 Historic Time Line Analysis



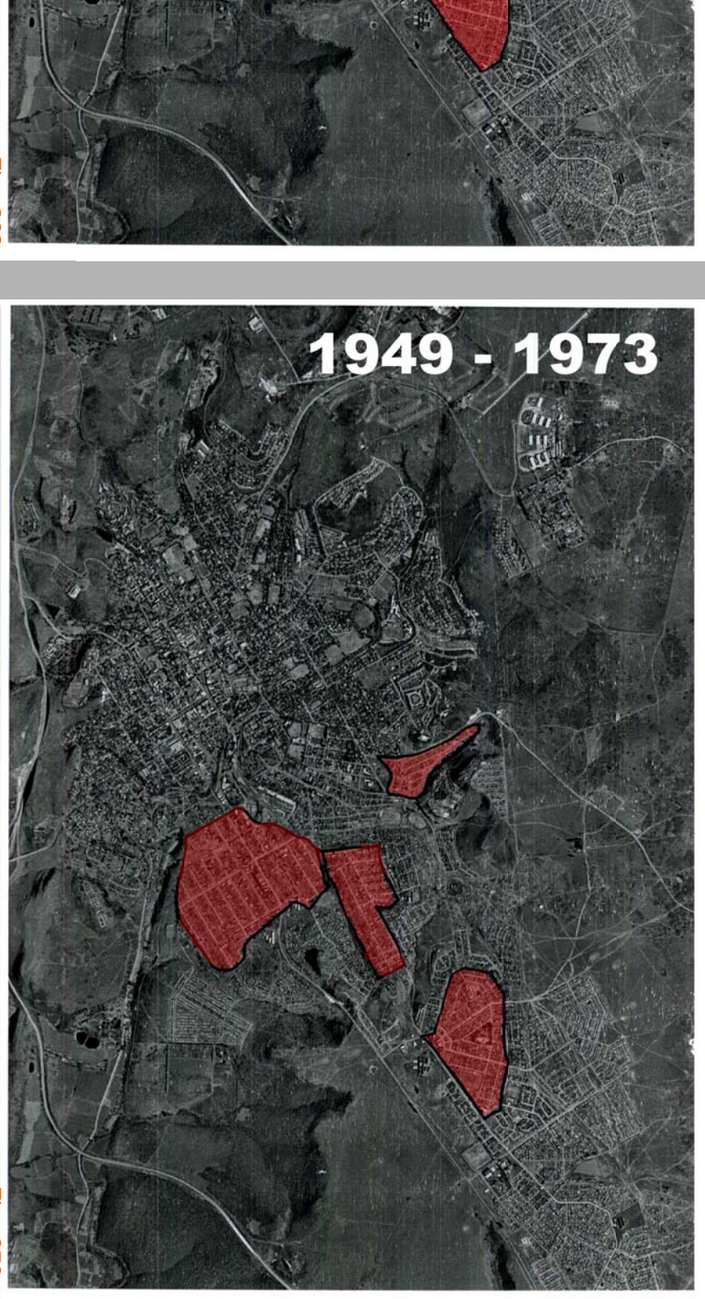
Development of Fingo village prior to 1949 (1840's) Fig. 367



Development of Tantji village Fig. 368



Development of Zola location and Sun city location Fig. 369

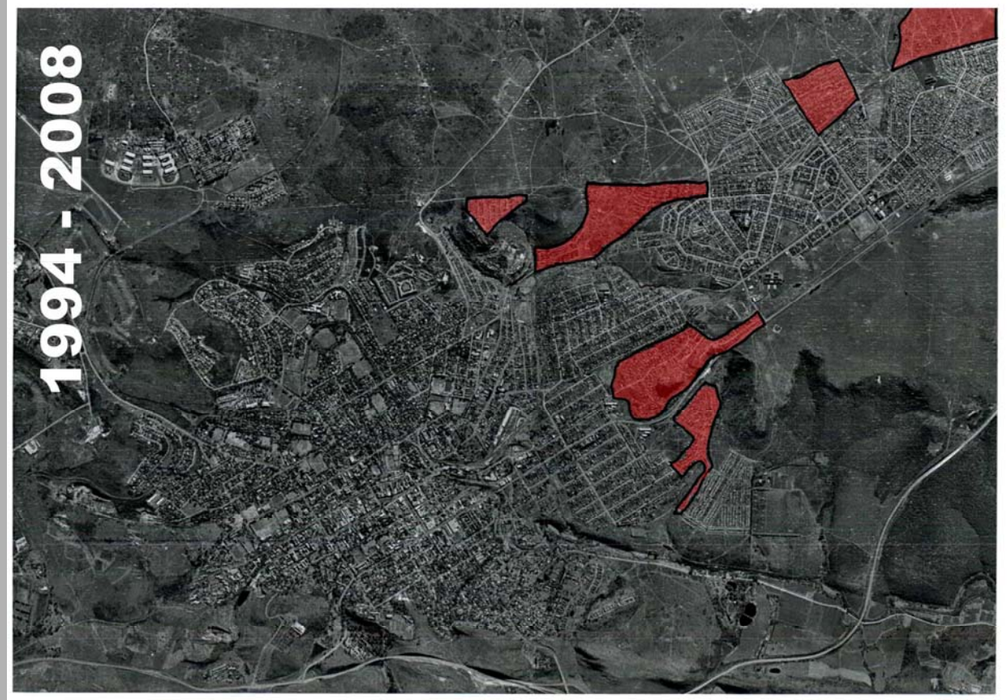


Development of original "townships" Fig. 370

Aerial pictures supplied by: National Geo-Spatial Information



Expansion of original townships Fig. 371



Development of Informal townships Fig. 372



Fig. 373



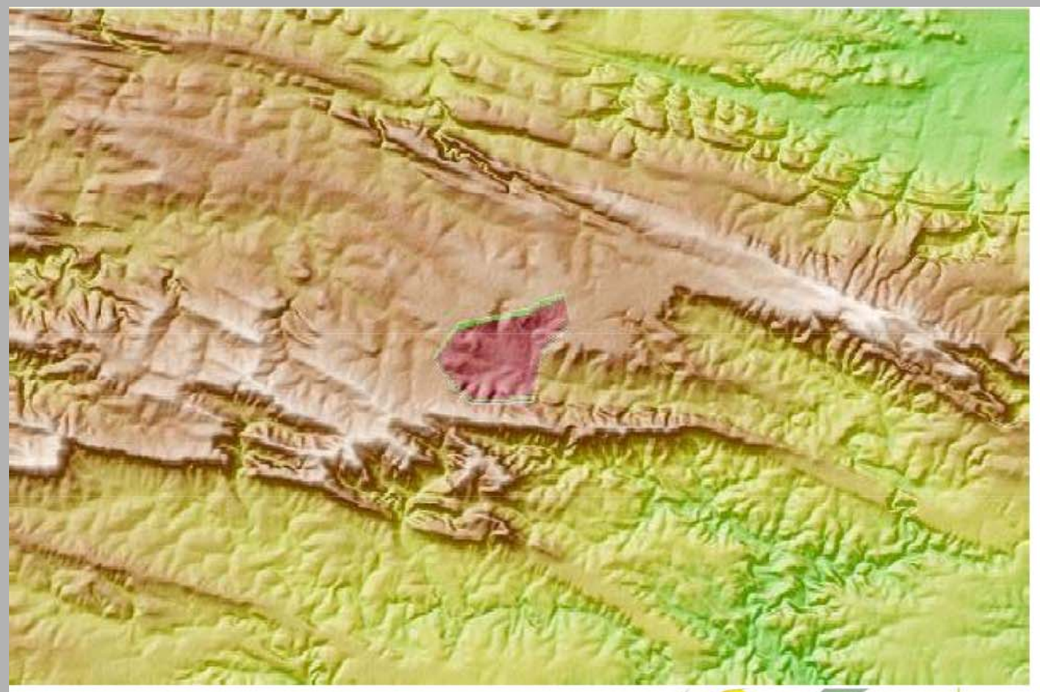
Fig. 374



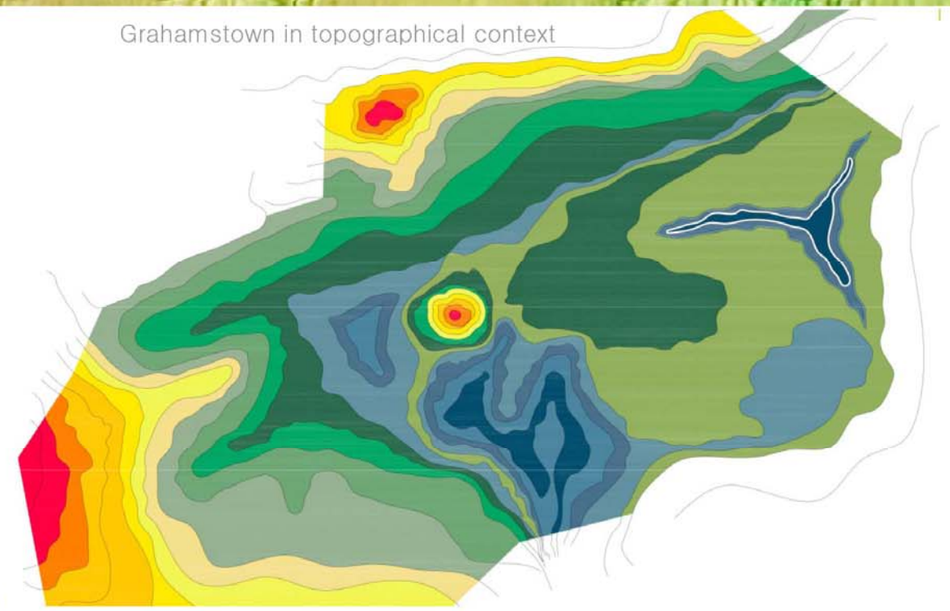
Fig. 375

Aerial pictures supplied by: National Geo-Spatial Information

3.7 Topographic Analysis

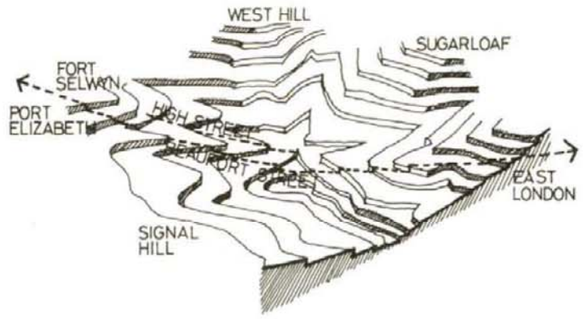


Grahamstown in topographical context



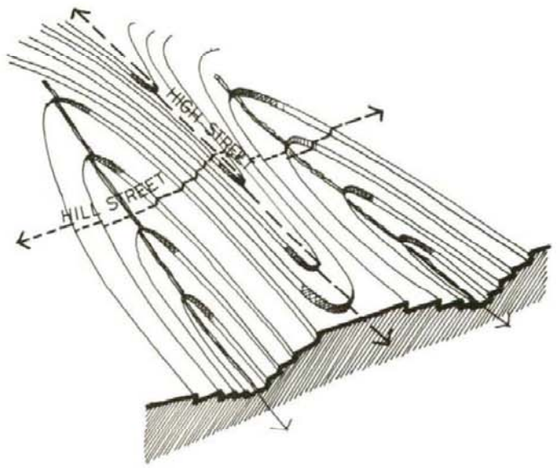
Drawing by Author , Autocad 2011 coloured lines and fill on white background

Contour Study



12 Grahamstown's topographical situation

Images from : Gledhill, 1975. p 13-14



Images from : Gledhill, 1975. p 13-14

13 The High Street spur and the streams on either side

Fig. 376



Fig. 377



Fig. 378



Fig. 379



Fig. 380

Drawing by Author , Autocad 2011 coloured lines and fill on white background



Fig. 381

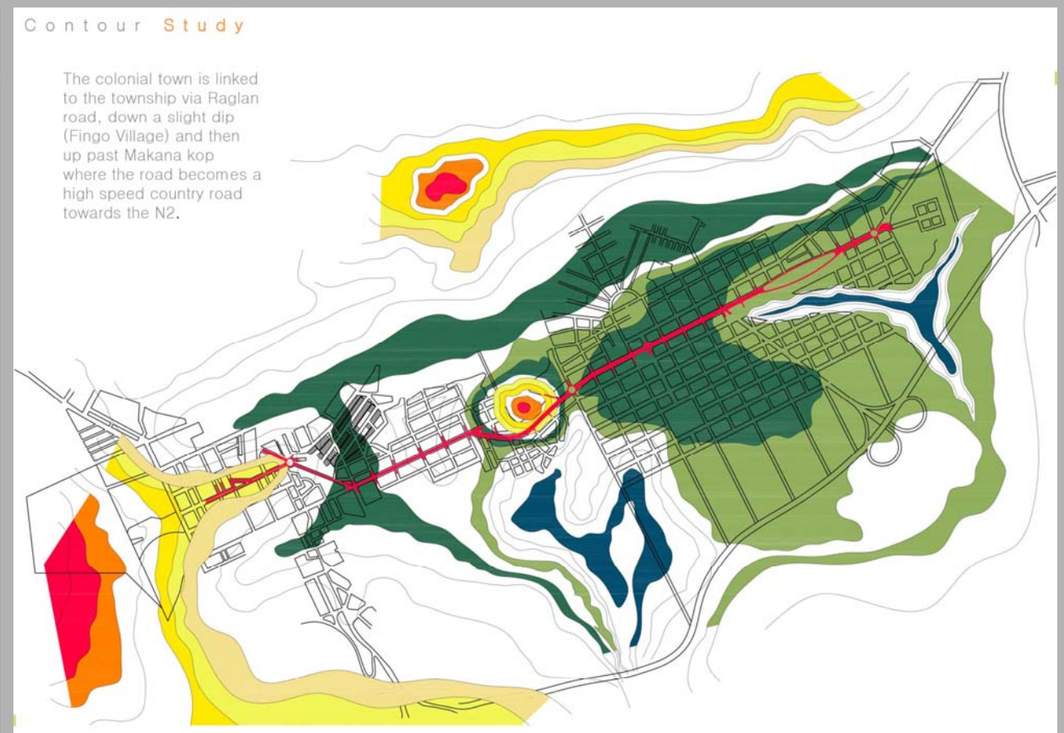


Fig. 382

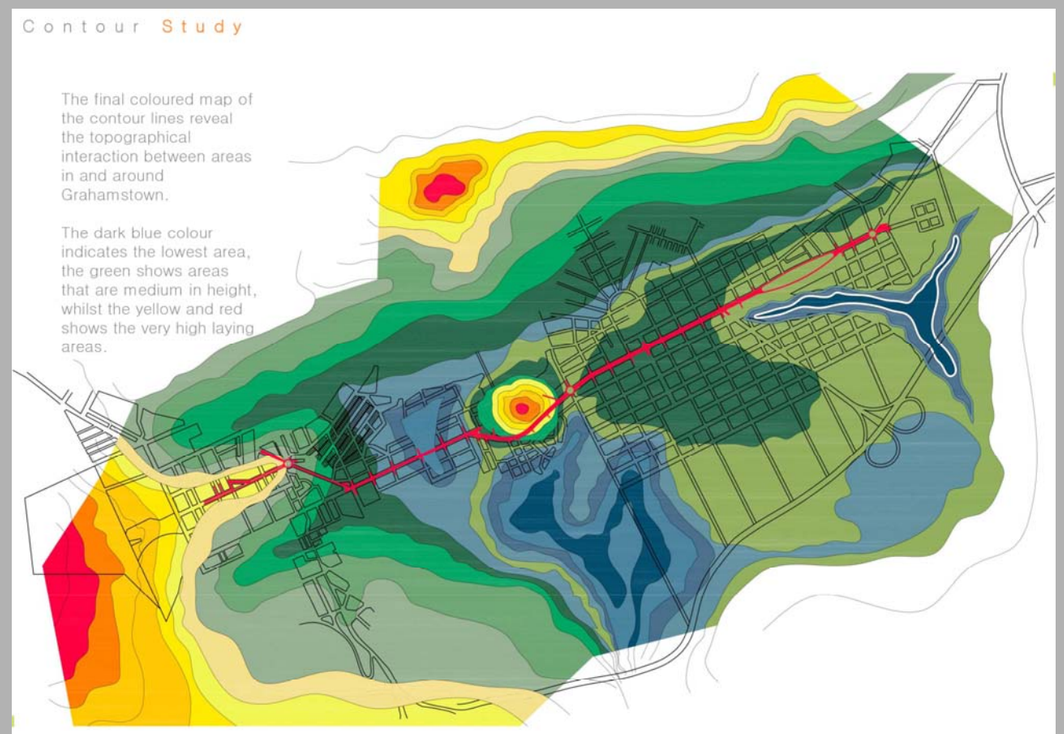


Fig. 383

Drawing by Author , Autocad 2011 coloured lines and fill on white background



Fig. 384



Fig. 385



Fig. 386

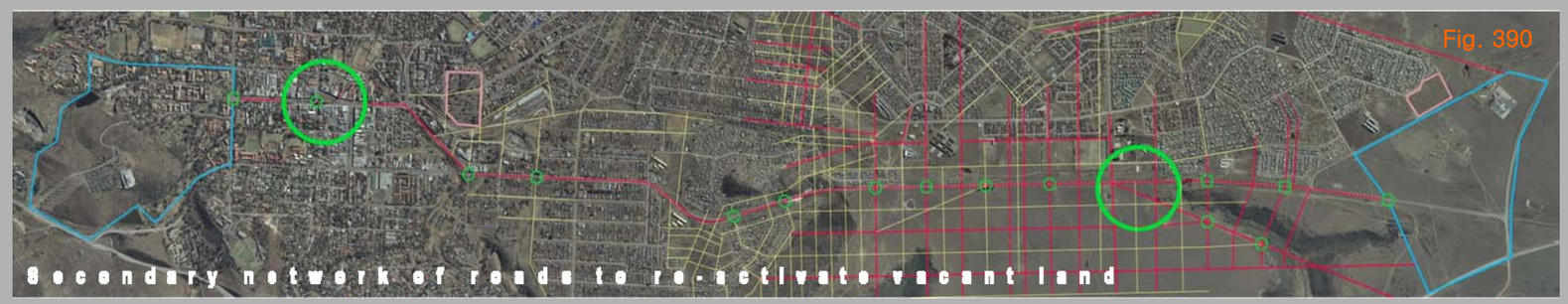
Drawing by Author , SketchUp Model explora-

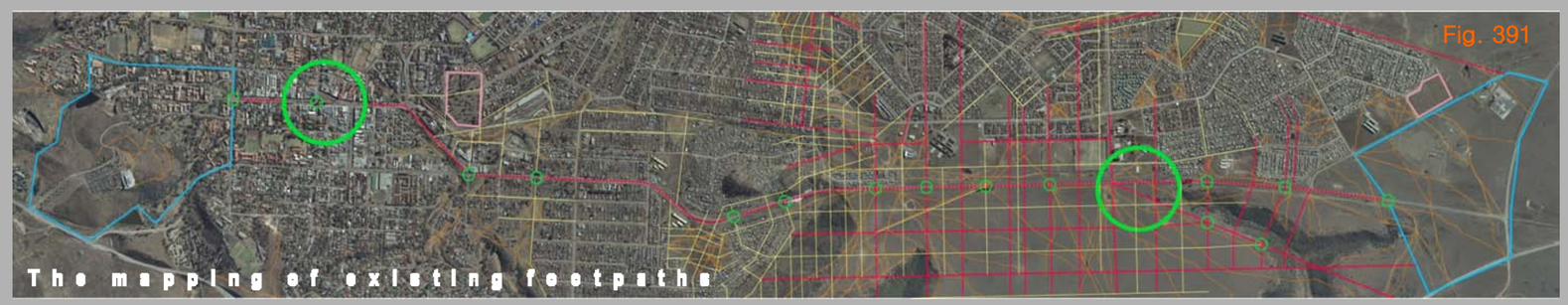
3.8 Simulation Analysis









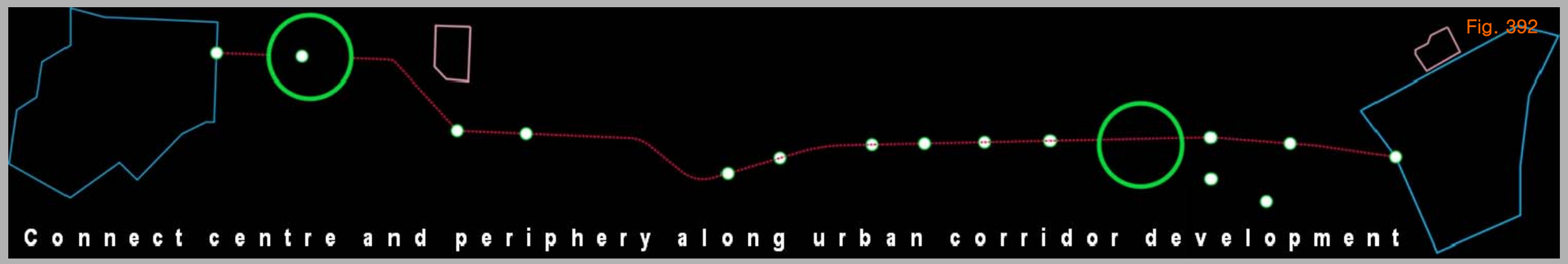


Drawing by Author , Autocad 2011 coloured lines overlaid on aerial pictures supplied by National Geo-Spatial Information

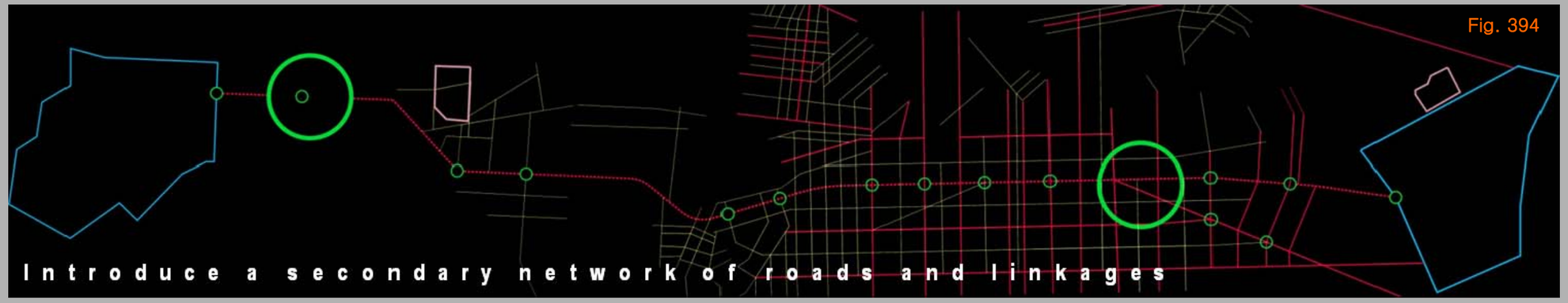
The simulation was done to try and create a system of roads and linkages around a central corridor or spine. The roads would consist of the following:

1. Major arterial roads
2. Minor arterial roads
3. Collector streets
4. Local streets
5. Boulevards
6. Mid block roads
7. Pedestrian only roads
8. Alleys
9. Footpaths

The hierarchy of roads and their relation to the main corridor or spine road will be critically important in linking areas of the township to one another effectively. It is important that the roads of varying traffic use, speed and width support one another and the users, in such a way as to effectively carry traffic from busy arterials to quieter local streets in suburban areas, and that these local streets are fed by mid block roads, alleys and footpaths to ensure the pedestrian is included in the system.



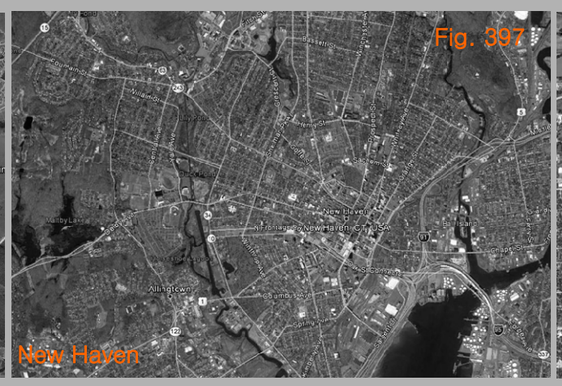




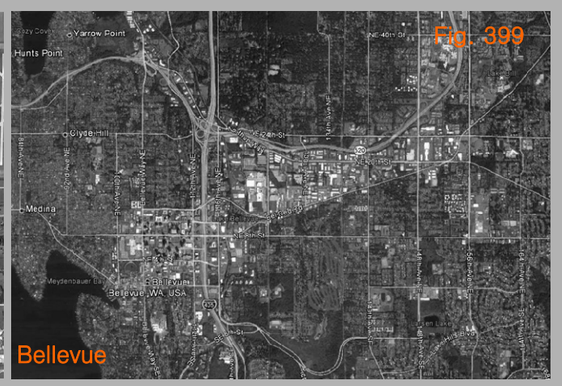


Drawing by Author , Autocad 2011 coloured lines on black background









3.9 Comparative Analysis – Population Density

Photos by: Google Earth

1996	Grahamstown Population	65 000
2000	Grahamstown Population	125 000
2010	Grahamstown Population	250 000
2050		310 000



Fig. 3100

Drawing by: The Author, HB Pencil on Tracing Paper

World City Scale

Canberra Australia	345 000
Christchurch New Zealand	361 250
Wellington New Zealand	393 400



Fig. 3101

Canberra Australia



Fig. 3102

Wellington NZ

Photos by: Google Images

World Cities of 130 000 or Less

Bellevue	US	129 000
New Haven	US	128 430
Topeka	US	124 345



Fig. 3103

Topeka



Fig. 3104

New Haven



Fig. 3105

Bellevue

Photos by: Google Images



Grahamstown



Topeka

Comparative aerial pictures CBD areas: Scale of CBD



New Haven



Bellevue

3.10 Demographic Analysis

Population (Moller et el,2001)

Local opinion has it that the 1996 census under-reports the black population of Grahamstown.

Controversy and speculation on the size of the black population in Grahamstown East is not new. Doubts about the accuracy of official estimates and counts have plagued local decision-makers for many years. Some ten years ago, a report compiled by ISER"s Development Studies Unit sought to clarify the issue (Williams & Davies, 1989). The bone of local contention was a sample survey conducted for the Rini

Council which claimed the population was 38 096 in 1988. Official population estimates for years between 1980 and 1986 yielded an average 43 055 with 1983 as the mid-point date. A mid-point 1983 estimate of around 44 000 could be derived from census estimates of 40 771 in 1985 down from 48 074 in 1980. Local estimates from sources as varied as school attendance records, birth and death records, registered pensioners, water consumption and sewage output yielded estimates of between 50 942 and 63 000 with an average 57 016. According to the authors of the report, Williams and Davies, it therefore seemed "prudent to conclude .. that the population of Rini should be accepted to be at least 60 000" (1989:21).More recent estimates of Grahamstown"s population include

Manona's estimate of over 200 000 Xhosa speakers in the Grahamstown area in the late1990s1997:108).

A popular guesstimate is a population of 100 000 of which the black population comprises some 85 000. A commonly held notion is that some 40 new households move into Grahamstown East per month.

According to the 1996 Census Grahamstown has a total population of 62 637 of which the black population is 44 696.

The 1996 census enumerated 41 022 individuals in 8647 Grahamstown East households. The enumeration of individuals in Grahamstown East households in ISER"s May 1999 survey yields a population estimate of 54 252 if rough population weights are applied. Census "96 collected information from 8 647 households. The sampling frame for our 1999 survey was initially 9218 plots increased to 10 344 in the field. Our population weights are based on the conservative assumption that each plot accommodates only one household. The discrepancy between the census and survey figures is 1 697 new households in Grahamstown East/Rini in two and one-half years. It is unlikely that the splitting of existing households and in-migration between October 1996 and May 1999

The above extract was taken from (Moller et el, 2001)

Ethnicity, Race, and Population Statistics,

(Strobel et el, 2011)

Grahamstown is said to be one of the most segregated cities within South Africa (O'Meara and Greaves, 1995). Whilst the inner city is dominated by the white population, the neighbouring townships have a large growth rate of black and coloured majorities (O'Meara and Greaves, 1995). According to STATSA (2003) the population of the greater Grahamstown is 124 758 of which 77.4% are Black, 11.8% Coloured, 10% White and 0.7% Asian. (Strobel et el, 2011)

Economic drivers in Grahamstown

- Rhodes University 7000 students and 2000+ staff (375 academic staff)
- Private Schools x 7 (27 schools in total)
- Three Large hospitals (600 beds)
- Military base 6 SA Infantry Battalion
- Airport
- High Court of the Eastern Cape
- Prison ("Waainek" Correctional Centre 680 prisoners)
- Large farming community
- Light Industrial activities
- Light Mining activities (Kaolin is mined here for use in paper)
- Civic functions Local Government, Police
- Cultural Heartland various festivals (National Arts Festival 50 000 people)
- Tourism , eco, museums, monuments
- Informal (retail and farming)
- Wind Farming proposed at Waainek.