1. Introduction

Town planners in South Africa are confronted with a range of problems such as declining CBDs, growing informal settlements and lack of industrial land. Most current plans do not provide sufficient information and guidance to frame and address these problems.

In the province of KwaZulu-Natal (KZN), the responsible government department responded by commissioning a study to formulate planning instruments to deal with these problems. The output was the Urban Development Framework (UDF) Manual which was developed and tested in uMhlathuze, the fastest growing city in KZN. The Manual was completed in 2011; later that year it received the KZN South African Planning Institute Award as best professional project in 2011.

The UDF can be used as a source book by Planning practitioners working in or with urban municipalities. It provides tools to identify and analyse the main problems in cities and to address them through informed interventions. It contains a number of training workshop frameworks together with advisory materials that can be used to develop municipal specific Urban Development Frameworks. The Manual comprises of an introduction and seven chapters starting with the Foundation Chapter, that provides a practical method to analyse the urban system and processes of change for the whole city; to identify different urban area-types and their problems. The remaining chapters each focus on one of the generic urban area-types listed below, analysing typical problems in detail and outlining interventions to address them.

The aim of this paper is to present a brief synopsis of the approach and methodology used to construct the UDF Manual; and then to focus on the Foundation Workshop. This provides a methodology well suited for rapid appraisal of the main urban development problems in a medium sized city and a framework for addressing them. Finally the paper reflects on how the UDF Manual can be used in other cities. The paper will present the Foundation workshop in sufficient detail for planners to replicate in their cities.

2. Workshop Based Methodology and Case Study

The overall approach to constructing the UDF Manual and testing it in uMhlathuze was based on a number of workshops involving municipal officials and other key stakeholders. The methodology started with an analysis of the urban system in the case study municipality; followed by a Foundation workshop and six further workshops, one on each component or area-type of the urban system. The purpose of each workshop was to enable municipal officials to unlock development potential of the particular urban component. Specific objectives were to enable municipal officials to:

- manage manifest problems more effectively;
- unlock underutilised land and infrastructure resources;
- and identify what levers are available to municipalities to increase efficiency of that component.
The rationale for selecting uMhlathuze as the case study was based on a number of factors, notably:
- It is the fastest growing city in the province with major industrial operations taking place;
- It experiences strong rural to urban migration and related settlement patterns with limited land area;
- It faces environmental challenges on account of spatial formation and industrial development;
- It is an area of great potential and established infrastructure; and
- It displays a myriad of the characteristics and qualities of a city in rapid development mode.

For these reasons it was regarded as a useful context to develop a UDF which would be applicable for KZN’s other large cities.

3. Laying the Foundations

3.1 Foundation Workshop – Purpose and Structure

The purpose of the Foundation Workshop was as follows:
- Identify the most significant urban development issues in uMhlathuze;
- Identify the main components of the urban system in uMhlathuze and agree on terminology to describe each one;
- Articulate the core problem in each area;
- Reach consensus about desired outcomes;
- Get a sense of the range of strategies which could be adopted/selected;
- Agree on the priorities to be addressed in the short-term.

Accordingly, the workshop was structured so as to:
- Confirm the understanding of the uMhlathuze urban system and processes of change;
- Identify settlement types;
- Compile a key urban issues table for each area type showing trends, core problems and desired outcomes;
- Identify generic levers to manage urban processes.

3.2 Framework for Analysing the Urban System and Processes of Change

The framework for understanding the urban system in a large municipality is based on a number of key questions:
- What is the economic base of the city and what role does it play in the regional space economy?
- Where, and under what conditions, are the people living?
- What economic activities do they engage in and where are these located?
- How do people travel between homes and work/shopping/recreation/other activities?
- How, and under what conditions, is the land used?
- Where are the “no go” areas for development?
- What are the trends and processes of change?

The methodology for analysing the urban system in a focused way involved the following steps:
- Examining the principal strategic planning documents (in South Africa): Integrated Development Plan (IDP), Spatial Development Framework (SDF) and related documents);
- Discussions with local municipal officials and specialists who had undertaken studies;
- Undertaking a field visit to see how various components of the urban system were manifested in uMhlathuze;
- Drafting a short presentation and report to synthesise the current situation (back-up details remain in all the source documents). The outline of the presentation is attached in Annexure 1. The purpose of this strategic perspective was to identify:
  o the main trends;
  o the processes of change; and
  o the implications of these for the urban system.
- Confirming the findings in a participative workshop (Foundation Workshop) and identifying the key urban issues and priorities.

The analytical framework provides the municipality with a structured perspective and methodologies to address priority problems and, where appropriate identify the intervention levers which will have the greatest impact.

3.3 Preparation for the Foundation Workshop
In preparation for the one-day workshop a Technical Committee, consisting of outside experts and two dedicated municipal officials, which had been established to manage the preparation of the UDF, confirmed that the objectives were to:
- Understand the town in its context of economic trends and their spatial manifestation, migration patterns and trends, and environmental trends;
- Identify area-types within the municipal urban system;
- Identify trends, problems and desired outcomes for each area-type.

As these objectives were technical the participants of the Foundation Workshop were mainly municipal officials. The composition of the group of local participants was fundamental for the entire process. All municipal departments that manage urban processes or that are involved in planning and regulating developments should be present. Depending on the local situation additional stakeholders such as representatives of major industries should be invited. In the case of uMhlathuze, these were the Richards Bay Industrial Development Zone and the Richards Bay Port. Other participants were representatives of the District Municipality and of the provincial Departments of Cooperative Governance and Traditional Affairs (COGTA) and Economic Development.

The workshop, with a maximum of 20 participants, was hosted by the municipality and took place at a venue in the municipality. Catering was provided by the municipality. The detailed workshop programme was circulated with the invitation sent out by the municipality to enable the participants to prepare their inputs.

3.4 Programme and Conduct of the Workshop
The workshop was opened by a representative of the host municipality. It consisted of presentations with discussions and interactive work sessions. A facilitation plan is a useful tool for the facilitators to prepare the different sessions of the workshop. For each session the plan indicates the facilitation method, such as power point presentation, open discussion or card exercise, and comments e.g. on necessary equipment and tasks assigned to participants. The objectives, content and methodology of the two interactive work sessions are explained below. The Facilitation Plan for the day, showing how time was allocated between different activities and which methodologies were used, is included as Annexure 2.

3.5 Identification of Components of the Urban System
The Urban Development Framework is structured around distinct urban components or area-types. Despite their obvious differences, cities in KZN, and South Africa typically exhibit all or some of the following components:
- Established urban cores (CBDs)
- Suburbs and vacant potential infill areas
- Former apartheid townships
- Well located informal settlements and informally densifying peri-urban settlements
- Dispersed peri-urban settlements
- Strong economic activity zones such as industrial areas.
The different components were identified in the municipality and marked on a map. See example of uMhlathuze in Figure 1 below.

The urban area-types are the point of departure for further analysis and planning. Urban development and problems differ strongly in the different area-types and require different interventions by the municipalities.

**Mapping**

The mapping can be done by manually drawing on a large printed aerial photograph or on the GIS system. The output of this step is a map of the municipality indicating the different urban area-types.

In the workshop situation drawing manually on an air photo is simpler. The drawing can be transferred onto GIS after the workshop.

![Figure 1: Area types in uMhlathuze Municipality (Source: UDF Manual, 2011 Figure 2.1)](image)

For each urban area-type trends, problems and desired outcomes are identified and noted in table format. They will guide interventions in each of the areas in later stages of the Urban Development Framework.
Development trends are identified for a specific urban area-type based on the analysis of the urban system and processes of change in the municipality undertaken earlier in the workshop. The trends were discussed by participants, guided by questions such as:

- Do these trends have positive or negative impacts on land use in the area?
- Is the situation generally improving or deteriorating?
- Are planning interventions necessary now or in the future?

If the situation is deteriorating the resulting problems are identified and specified by discussing the following questions:

- What are the reasons for the problem?
- Why is it a problem?
- Who is involved?
- For whom is it a problem?
- What specifically is the problem?

In the final column the ideal situation for the urban area-type is described. This can be done by re-phrasing the problems (i.e. negative situation) positively as desired outcomes in the future. If this step proves difficult it is usually because the problems have not been stated clearly and specifically.

It is important to capture the views of all participants on trends, problems and desired outcomes for each area. The card method can be used to achieve this.

For each area-type a separate table was drawn on large sheets of paper. All participants wrote their understanding of trends, problems and desired outcomes on cards using koki pens. The cards were read out and displayed on the tables. Similar ideas were clustered. In the discussion of the statements agreement was reached on the core problem of each area-type.

### Rules of card method

- Write only three lines per card in legible handwriting
- Use short sentences not single words
- Write only one idea per card

#### 3.6 Assessment of Urban Area-types in uMhlathuze

By way of example, the content of the UDF assessment for two area-types, based on the uMhlathuze workshop and adapted slightly so as to be applicable in other KZN cities, are presented in Tables 2 and 3. Some of these trends, problems and desired outcomes are likely to look familiar to planners working in other countries and contexts.

<table>
<thead>
<tr>
<th>Trends</th>
<th>Problems</th>
<th>Desired outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>In most South African towns and cities the central business districts have declined due to loss of buying power to suburban developments. CBDs are no longer used by all groups of the population and poorer groups dominate. This has resulted in lower investment into CBDs. The two CBDs in uMhlathuze Municipality – Richards Bay and</td>
<td>Problems for municipality There is no master plan addressing urban form, movement (vehicles, freight, pedestrians), urban renewal, densification and the urban environment. There is only limited space for expansion in the CBD and no policy on how to direct and manage it. Conflicts between vehicles (private and taxis), pedestrians, shoppers and operators of small, often informal businesses occur.</td>
<td>Improved public transport facilities and accessibility of destinations in CBD for visitors. Development of affordable office/business space for small and emerging enterprises. Detailed master plan addressing urban form, movement (vehicles, freight, pedestrians) urban renewal, densification, and the environment.</td>
</tr>
</tbody>
</table>
Empangeni – differ considerably. Richards Bay was founded in the 1970s and its CBD has only recently been fully established. The CBD of Empangeni is more typical for secondary towns in KwaZulu-Natal. CBDs are regional centres with a large influx of people and public transport from surrounding rural areas on a daily basis to access stores and services. Most users belong to lower income groups accessing lower order retail and government services. Middle income groups have withdrawn their buying power from the established CBDs and use new shopping centres in the suburbs. Informal economic activities have increased in the CBDs leading to degradation. Activities such as food preparation in the streets, car washing and trolley pushing are not regulated and cause problems of hygiene and security. The public transport facilities are limited and minibus taxis operate illegally from parking lots. There is increasing demand for sites and premises for small businesses who cannot afford the rents charged in the CBD.

Problems for residents / businesses
Unregulated on-street parking of public transport vehicles causes a sense of chaos for pedestrians and private cars. There is a lack of land and affordable premises for small commercial and office developments.

Many small businesses operate illegally from home. The current Town Planning Schemes are too inflexible to respond to these trends, e.g. they do not allow limited retail/office in residential areas adjacent to CBDs.

Table 2: CBDs in decline

<table>
<thead>
<tr>
<th>Trends</th>
<th>Problems</th>
<th>Desired outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Due to the low densities of most suburbs residents rely predominantly on private transport. In many suburbs ad hoc land use changes occur such as additional dwellings and non-residential land uses on residential sites in contravention of the town planning control mechanisms. The often elaborate designs from years gone past now impact on maintenance costs with the effect that conditions of parks, recreation areas, verges and sidewalks are deteriorating. Safety and security e.g. of pedestrians is also deteriorating. Initiatives by municipalities to sell underutilised public open spaces for infill development bears the risk of selling valuable municipal open space system (MOSS) areas because the core MOSS areas are not well defined.</td>
<td>Land use changes are occurring in contravention of the Town Planning Schemes, which are proving too rigid to accommodate current needs. As a result small businesses operate illegally from parking lots. There is a lack of space for expanding the suburbs but no densification policy exists on how to use existing suburbs more intensely. Typically no plan exists for the municipal open space system to guide the release of vacant land for infill development. The inflexible land use management system hinders residents wanting to work from home even if this would not disturb, but benefit the suburb. There is a need for more housing in well located and serviced suburbs. Suburbs cater typically for families with children but increasingly a need has occurred for a broader range of household types catering for people in different stages of life cycles and social situations.</td>
<td>Appropriate land use management system to accommodate current demands and to remain an effective mechanism for urban management; Proper management of infill areas; Better use of existing infrastructure capacity; Increased services capacity to support densification policy; More opportunities to increase residential densities e.g. (2 dwellings on a site) and to engage in non-disturbing working from home; Increased densities to support more public transport.</td>
</tr>
</tbody>
</table>

Table 3: Suburbs and infill areas

The existing planning and control mechanisms are not coping with the demand for changing uses and development pressures in the suburbs. At the same time, some layouts impose high maintenance costs for the municipality.
3.7 **Generic Levers for Management of Urban Development Processes**

There are four generic levers available to public sector organisations for managing urban development processes. These are:

- Public infrastructure development: Planning and coordination of where and when public sector capital investment occurs in order to lead private initiative and consumption in desired directions.

- Regulatory mechanisms: The development and application of regulations and controls that prevent and regulate land use practices through statutory instruments such as Land Use Management Schemes, Environmental Management Frameworks and the like.

- Establishing partnerships with local non-government stakeholders.

- Promoting and incentivising appropriate land use practices. Educating stakeholders and offering incentives to adhere to land uses that are in line with development objectives.

The main elements of each lever are summarised below.

### 3.7.1 Public infrastructure investment

Figure 2 shows the main public services and the government institutions in charge in South Africa.

![Figure 2: Infrastructure types and providers (UDF Manual 2011, p.23)](image)

The principal instrument to achieve public sector investment coordination at the local level in South Africa has been the IDP process. But this instrument has not performed as desired with regard to investment coordination and will need to be reinforced. Two elements need to be put in place if progress is to be made in establishing an appropriate public sector capital web:

- A spatial plan, specifying the medium to long public infrastructure investment approach;

- Capacity to systematically pursue the alignment of individual departmental investment programmes with this plan on a continuous basis. Such capacity needs to be mobilized and institutionalized.

### 3.7.2 Regulatory Mechanisms

Different regulatory instruments hold the potential to direct private land development and land use in urban areas. The principal challenge faced in establishing an effective regulatory framework is the distribution of these instruments over a diverse range of institutions,
coupled with uneven formulation and application. This is compounded by the fact that in South Africa no single instrument has unequivocal authority over the other.

3.7.3 Management partnerships
Private-public-partnerships (PPP) mobilise additional resources from partners outside government such as private and collective land owners; informal traders; small and big businesses; taxi operators; sport clubs; community groupings; religious groups. Supplementary resources from these partners can be financial contribution, services and ‘sweat equity’. PPPs should be distinguished from outsourcing of urban management functions to private sector, cooperatives or community based organisations (CBO).

3.7.4 Incentives and rewards
Internationally, incentives have long been used as mechanisms to direct land use activities in directions favored by public authorities. In the South African context their use has been less frequent and systematic. But, modification of existing mainstream programmes and instruments could generate powerful incentives e.g. for modification of land use practices. Figure 3 shows options for incentives and institutions that can provide them.

The use of incentives and disincentives requires similar institutional innovations as those described under public infrastructure investment. In many situation ‘perverse incentives’ (incentives that promote inappropriate activities or land uses) exist that should be removed.

4. Application of the Foundation Workshop Results for Area-types in the City
After the Foundation workshop had been completed, a separate workshop was held on each of the six area-types. Each workshop drew on the findings of the Foundation workshop in respect of the area-type (e.g. declining CBD); it presented material from other cities (in South Africa and internationally) relating to the particular problem, together with best practice responses. The workshop then proceeded to formulate a methodology for responding to priority issues (e.g. declining CBDs). The workshop material, methodology and findings were written up so as to become a chapter in the UDF Manual, which thus contained generic methodologies on how to approach each area-type for use by municipal officials. The UDF Manual thus provides municipal planners with a rapid and highly cost effective approach to
analyse their city as the sum of typical parts; it provides methods to identify problems in the parts; and information on how to address problems.

The chapters on the individual urban area-types were all structured in a similar way:
- Report on preparation for the workshop, how it was to be conducted and expected outcomes;
- Draw on the findings of the Foundation workshop about the particular urban component;
- Identify key problems that need to be addressed and desired outcomes;
- Explore the characteristics and trends in other South African cities and international examples;
- Present case studies of best practice in responding to the particular urban problem;
- Present a methodology for the municipality to follow in tackling the problems;
- Present a case study from the uMhlathuze municipality in which to test the applicability of best practice interventions;
- Apply the methodology in the uMhlathuze case study.

5. Conclusions

The UDF Manual was developed during a period of eight months. Seven workshops were held in uMhlathuze at monthly intervals. In uMhlathuze the complete framework was developed covering all area types. The Department of Cooperative Governance and Traditional Affairs (COGTA) successfully tested the implementation of the Urban Development Framework Manual in the Newcastle and Hibiscus Coast municipalities in KwaZulu- Natal during the 2011/12 financial year. Both of these UDF’s utilised the tools to identify, analyse and address the problems associated with, and as outlined in, the chapters on Central Business Districts, Suburbs and Infill Areas, and Informal Settlements. The implementation of the manual in the Newcastle municipality focused on the areas around the new Newcastle Mall and its interfaces with surrounding residential areas, while the Hibiscus Coast intervention looked at ways to spatially rejuvenate the Port Edward and Hibberdene CBDs.

In conclusion, the paper argues that the UDF Manual provides municipal planners with a streamlined and practical approach to analyse their city as the sum of its typical parts; it presents methods to identify problems in each typical urban component; as well as information and methods on how to address the problems. Furthermore, the analyses of problems and identified interventions feed into the municipal spatial plans (in South Africa the SDF) making them more useful planning documents. The methodology and approach can be readily adapted for use in rapidly changing cities in other countries.

Annexure 1: Framework for rapid assessment of an urban system and processes of change

<table>
<thead>
<tr>
<th>.... Name of city... Urban System and Processes of Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Current situation</td>
</tr>
<tr>
<td>1.1 Function in a national/regional context</td>
</tr>
<tr>
<td>- Trends, prospects and implications</td>
</tr>
<tr>
<td>1.2 ... name of city ... what makes it distinctive?</td>
</tr>
<tr>
<td>- Trends and implications</td>
</tr>
<tr>
<td>1.3 Population trends</td>
</tr>
<tr>
<td>- 2010 total (best estimate) and number of households</td>
</tr>
<tr>
<td>- Distribution by settlement</td>
</tr>
<tr>
<td>- Level of urbanisation</td>
</tr>
<tr>
<td>- Household sizes</td>
</tr>
<tr>
<td>- Growth trends</td>
</tr>
<tr>
<td>o Natural increase</td>
</tr>
<tr>
<td>o Net migration</td>
</tr>
<tr>
<td>- Projections (5, 10, 15 and 20 years) based on different sets of assumptions and associated land uptake</td>
</tr>
</tbody>
</table>
### 1.4 Settlement pattern and function of each component including peri-urban, rural settlements and farms + level of services (bulk infra and road access)
- **Trends and implications**

### 1.5 Land use (% of municipal area)
- Agriculture
- Conservation
- Urban
  - Settlement
  - Industrial/business/commercial
  - Major facilities and bulk infrastructure
- **Trends and implications**

### 1.6 Land tenure (% of municipal area)
- Privately owned land
- Ingonyama Trust land
- State land
- Unresolved land claims
- **Trends and implications**

### 1.7 Housing – for each settlement a table showing number of housing units, tenure, type of housing, general condition, density, income group(s), level of services (water, sanitation, electricity, road access, internal road conditions)
- **Trends and implications**

### 1.8 Economic activity (relative contribution, recent growth trends and future prospects)
- Contribution by formal sector
- Trends in main sectors in the city
- Informal sector
- Land available for future economic development
- **Trends and implications.**

### 1.9 Employment
- Formal employment by sector
- Number of jobs and spatial clustering of formal jobs
- Informal employment
- Unemployment
- Labour force growth
- Level of skills in relation to local job market
- **Trends and implications**

### 1.10 Income and expenditure patterns
- Income sources
- Contributions to formal wage bill (e.g. manufacturing %?, government %?)
- Distribution of households by broad income groups
- Distribution of settlements by broad income groups
- Expenditure patterns
- Expenditure on transport to work
- **Trends and implications**

### 1.11 Transport network and movement patterns
- Road hierarchy and network
- Public transport
- Movement patterns (to work, schools, government, pension pay points, etc) and modes of transport
- Freight movement patterns and modes of transport
- Rail
- Air traffic
- **Trends and implications**

### 1.12 Environment
- "No-go" and costly to develop areas
- Air pollution and quality
- Sensitive environmental systems
- **Trends and implications**

### 1.13 Bulk infrastructure network and spare capacity
- Water and sanitation
- Electricity
- Road access
- Waste disposal
- **Trends and implications** (e.g. which areas can expand within existing infrastructure network; which with relatively minor additions? Which areas are growing outside infra service network?)

### 1.14 Regional scale facilities
- Significance and contribution to the city's development
- **Trends and implications**
1.15 Major stakeholders
- Who make things happen; or without whose support, things don’t happen?
- Alternatively group key stakeholders as supply side actors, end users and regulators; or potential partners.
- Trends and implications

2. Processes of change - synthesis
2.1 Employment
2.2 Demographic
2.3 Housing and settlement growth
2.4 Development applications...
2.5 Other locally significant drivers of change

3. Contribution of the Urban Development Framework
- Establish the urban typology
- Identify levers to manage urban processes
- Urban Key Issues (table)
- Provides guidance for development of urban areas (in subsequent workshops)

Annexure 2: Facilitation Plan of Foundation Workshop

<table>
<thead>
<tr>
<th>Time</th>
<th>Item</th>
<th>Facilitation method</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>10.00 – 10.15</td>
<td>Introduction</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10.15 – 10.20</td>
<td>Background to the project, purpose &amp; institutional arrangements (COGTA)</td>
<td>Contact Ivan to prepare</td>
<td></td>
</tr>
<tr>
<td>10.25 – 10.30</td>
<td>uMhlathuze as the case study (COGTA/uMhlathuze)</td>
<td>Contact Ivan or Lindani uMhlathuze</td>
<td></td>
</tr>
<tr>
<td>10.30 – 10.40</td>
<td>Methodology, overall programme (Team)</td>
<td>Prepare brief presentation of assignment on ppt slides</td>
<td>data projector</td>
</tr>
<tr>
<td>10.40 – 10.45</td>
<td>Structure and purpose of foundation workshop (Team)</td>
<td>Programme on overhead projector on ppt slide</td>
<td></td>
</tr>
<tr>
<td>10.45 – 11.30</td>
<td>Urban system and processes of change in uMhlathuze which underpin the SDF (Team), presentation of table on urban issues</td>
<td>Summaries collected data on urban system and processes of change as ppt presentation</td>
<td>Complete content of document and prepare ppt presentation</td>
</tr>
<tr>
<td>11.30 - 11.40</td>
<td>Levers to manage urban processes (Team)</td>
<td>presentation</td>
<td>Get info and prepare presentation</td>
</tr>
<tr>
<td>11.40 – 12.30</td>
<td>Identification of settlement types in uMhlathuze (Team)</td>
<td>Draw map on aerial photograph</td>
<td>Print aerial photograph map in A0 format of larger</td>
</tr>
<tr>
<td>12.30 – 13.00</td>
<td>LUNCH</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13.00 – 15.45</td>
<td>Populate the key urban issues table</td>
<td>open session facilitated &amp; recorded on cards</td>
<td>Prepare 6 urban issue tables on brown paper</td>
</tr>
<tr>
<td>15.45 – 16.00</td>
<td>Output of this workshop and outline of structure/format of Workshop 2 (Team)</td>
<td>Summarise output on flipchart, present format of workshop 2</td>
<td>Prepare outline of Workshop 2</td>
</tr>
</tbody>
</table>

Endnote

ii uMhlathuze municipality is slightly unusual in that it comprises two town centres, namely Empangeni (a long established market town) and Richards Bay (a new port city established in the 1960s). As Figure 1 shows the municipality also includes three large residential (former apartheid) townships, dense informal settlements, less dense peri-urban settlements, farms as well as significant port and industrial areas.

iii This section is based on chapter 2 of the UDF Manual, with adaptations to make it relevant for an international audience.

iv In this paper the term “area type” refers to the generic land use and settlement patterns that are found in all South African towns. These are the town centre (or CBD), residential suburbs and land available for infill development, townships established during the apartheid era (almost exclusively on the outskirts or at some distance from the urban centre), informal settlements, peri-urban low density settlements, industrial and commercial areas.