HDA
HOUSING DEVELOPMENT AGENCY
An agency of the Department of Human Settlements

# Pathways to Spatial Transformation

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# ABBREVIATIONS

| | |
|---|---|
| **AD** | Access Distance |
| **BEE** | Black Economic Empowerment |
| **BEPP** | Built Environment Performance Plan |
| **BETA** | Beneficiary Experience Tracking Application |
| **BNG** | Breaking New Ground |
| **CoGTA** | Cooperative Governance and Traditional Affairs |
| **CP** | Catalytic Projects |
| **CRU** | Community Residential Unit |
| **DALRRD** | Department of Agriculture, Land Reform and Rural Development |
| **DU** | Dwelling Units |
| **ECD** | Early Childhood Development |
| **EI** | Ecological Infrastructure |
| **EIA** | Environmental Impact Assessment |
| **EPHP** | Enhanced Peoples Housing Process |
| **EPWP** | Expanded Public Works Programme |
| **ERI** | Environmental Risk Index |
| **FLISP** | Finance Linked Individual Subsidy (now known as First Home Finance) |
| **GHI** | Geotechnical Hazard Index |
| **GEHS** | Government Employees Housing Scheme |
| **GHSPD** | Guidelines for Human Settlement Planning and Design (Previous Red Book) |
| **GIS** | Geographic Information Systems |
| **HA** | Hectare |
| **HDA** | Housing Development Agency |
| **HH** | Households |
| **ICT** | Information and Communications Technology |
| **IRDP** | Integrated Residential Development Programme |
| **IUDF** | Integrated Urban Development Framework |
| **LC** | Land Capability |
| **LDI** | Land Developable Index |
| **KMRU** | Knowledge Management and Research Unit |
| **M&E** | Monitoring and Evaluation |
| **MSP** | Master Spatial Plan for Human Settlements |
| **MTSF** | Medium Term Strategic Framework |
| **NDHS** | National Department of Human Settlements |
| **NDP** | National Development Plan |
| **NHNR** | National Housing Needs Register |
| **NMT** | Non Motorized Transport |
| **NPDG** | Neighbourhood Planning and Design Guide (Current Red Book) |
| **NSDF** | The National Spatial Development Framework |
| **NSTETR** | National Spatial Transformation and Economic Transition Regions |
| **OM** | Open Market |
| **PDAs** | Priority Development Areas/previously known as PHSHDAs |
| **PGDS** | Provincial Growth and Development Strategy |
| **PHDAs** | Priority Housing Development Areas |
| **PHSHDAs** | Priority Human Settlement Housing Development Areas |
| **SA** | Student Accommodation |
| **SACN** | South African Cities Network |
| **SAPS** | South African Police Service |
| **SH** | Social Housing |
| **SMMEs** | Small, Medium and Micro Enterprises |
| **SPLUMA** | Spatial Planning and Land Use Management Act |
| **SIFHS** | Spatial Investment Framework for Human Settlements |
| **STPT** | Spatial Transformation Planning Tool |
| **STST** | Spatial Transformation Scoring Tool |
| **UMP** | Urban Management Plan |
| **WD** | Walking Distance |

# INTRODUCTION

This publication on spatial transformation outlines the approaches taken to analyze, score and monitor spatial transformation at the Housing Development Agency (HDA) at different scales (project and area) and in different programmatic initiatives (IRDP, catalytic & PDAs). These approaches have an indicator focus. This focus assists the HDA to quantify spatial transformation outcomes and has assisted in developing pathways to achieve spatial transformation.

Spatial transformation is an essential concept in the South African housing sector and has a specific meaning in the South African context (HDA, 2017a). Spatial transformation is defined as "far-reaching urban change or urban restructuring" (Maritz, Van Huyssteen, Le Roux, Pieterse, Ndaba, Mans and Ngidi, 2016: 4). In the South African context, spatial transformation generally considers efforts to address the apartheid spatial structure and policy frameworks post-1994 emphasise transforming settlements and cities (Maritz et al., 2016). In the HDA's publication on the 'Assessment of the Integrated Residential Programme Development (IRDP) and its impact on Spatial Transformation', transformation is defined as:

> "'a spatially defined, socially embedded process; […] an interrelated series of materially driven practices, whereby the form, substance and overall dimensions of urban space are purposefully changed to reflect the principles of a more equitable social order' (Williams, 2000: 169 in SPLUMA, 2015). Spatial transformation is a process that is used to address the spatial legacy of apartheid hence it is imperative to look to the past, present and future when transforming the built environment." (HDA, 2017a: 10)

South African Cities Network (SACN) define spatial transformation as "the exercise of changing the form and function of space in a manner that directly benefits economic development" and highlights three focus areas for spatial transformation namely "urban patterns, dynamics and logistics" (SACN, 2015a: 10). Within transforming urban patterns there is a need to prevent urban sprawl and low densities as well as address historical spatial segregation with regard to class structure, land uses and unsustainable spatial trends (ibid). Within transforming urban dynamics, SACN recognises the need to address "ageing, resource-intensive and fragmented infrastructure networks as well as inefficient institutions" and address spaces that are anti-informal due to high regulation (ibid 10). Lastly, within transforming logistics is the need to "promote infrastructure systems that are central to urban flows of resources, people, and goods" (ibid 10-11).

Another publication by SACN (2015b) explains the objective of spatial transformation. It states that the transformation objective should realise "the need for inclusivity, mobility and access, economic development that drives local and national growth prospects and transforms space in a manner that is socially and environmentally sustainable" (ibid 4). Spatial transformation in South Africa is about significant change in the urban environment that emphasizes the need to change historical spatial patterns for economic development and includes a wide range of criteria for sustainable settlements.

# SPATIAL TRANSFORMATION IN POLICY FRAMEWORKS & LEGISLATION

The National Spatial Development Framework (NSDF) relates a similar definition of spatial transformation as:

> "[t]he carefully and collaboratively planned and well-managed process of (1) locating infrastructure, (2) providing social services, and (3) allowing, placing and incentivising economic activities in settlements in such a way that the segregated spatial patterns inherited from colonial and Apartheid times are broken down, and the inefficiencies, injustices and inequalities in access to economic and other opportunities resulting from these past patterns are corrected" (DALRRD, 2023: 19-20).

The NSDF identifies spatial transformation within one of the five spatial outcomes for the country (ibid). In the National Spatial Outcome 2, "National-scale corridors and regions of opportunity enable sustainable and transformative urbanisation, urban consolidation, mutually beneficial urban and rural linkages, and ecological management", the NSDF highlights the need to accommodate settlement growth and urbanisation in urban regions and nodes with a focus on development corridors and 'National Spatial Transformation and Economic Transition Regions' (NSTETR) (ibid 102).

Several other frameworks and legislation contextualise spatial transformation in South Africa. In the Integrated Urban Development Framework (IUDF), the outcome envisioned is spatial transformation, which is defined as "a sustainable growth model of compact, connected and coordinated cities and towns" (COGTA, 2016: 7). The IUDF identifies four strategic goals: 'Spatial integration', 'Inclusion and access', 'Growth', and 'Governance' (ibid 8). The IUDF is informed by the spatial transformation outcome and the conception of urban South Africa set out in the NDP (ibid). Chapter Eight in the National Development Plan (NDP) discusses changing the space economy and human settlements (Harrison and Todes, 2013). It gives "strong emphasis to the importance of spatial transformation in addressing concerns with poverty and inequality" (ibid 1). It argues that legacies of spatial segregation still pervade at different scales, and the locations of employment and homes are important (ibid).

Spatial Transformation relates to the Spatial Planning and Land Use Management Act (SPLUMA) as development principles include that of spatial sustainability, efficiency, spatial resilience, and spatial justice (South Africa, Spatial Planning and Land Use Management Act, 2013). Spatial justice principles in SPLUMA highlight the need to address past spatial imbalances, include previously excluded people through different mechanisms, and improve access to land by previously disadvantaged (ibid). Spatial sustainability principles speak to locating development in sustainable locations and creating viable communities; and efficiency principles include optimally utilizing infrastructure and resources (ibid). These principles align with the outcomes of creating spatially transformed settlements.

# WHY IS IT NECESSARY TO MONITOR SPATIAL TRANSFORMATION?

In the HDA (2017a: 31) publication on spatial transformation in IRDP projects, an important finding was a discrepancy between "urban planning and housing delivery logic". Spatial transformation centres around an urban planning logic and can contradict the housing delivery logic (ibid). One suggestion of the 2017 Spatial Transformation study was to "Enhance and Implement the Spatial Transformation Scoring Tool to measure the impact on Spatial Transformation" (ibid 33). Spatial Transformation scoring, monitoring, planning and analysis allow the HDA to convert human settlement targets into achievements and alert the HDA regarding red flags and when and where to intervene. It provides for prioritisation, i.e., stop working on the wrong projects and reclassify, and is a source of comparative analyses among projects.

Other frameworks have come up with similar suggestions, such as the NSDF. Within the NSDF's 'National Action and Key Role-Player' of Sub-frame Two, 'National System of Nodes and Corridors' it was highlighted that there is a need for "a collaboratively prepared and mutually agreed to 'intergovernmental spatial transformation accountability mode' by which all three spheres of government, sector departments and non-State actors will individually and collectively hold each other accountable for their planning, funding and investment decisions and delivery programmes about (1) investment in national priority spaces, (2) the pursuit of national spatial transformation and economic transition objectives, and (3) the care and respect for, and well-considered utilisation of our national natural resource base" (DALRRD, 2023: 124). Within the national action for this frame, it is recognised that there is a need to support the Department of Human Settlements Priority Human Settlement Housing Development Areas (PHSHDAs), now termed Priority Development Areas (PDAs) (ibid).

# SPATIAL TRANSFORMATION AT THE HDA: EVOLUTION OF SCALE AND TOOLS

Over the last few years, the M&E, Knowledge Management and Research Unit (KMRU) has developed various spatial transformation instruments to monitor, plan and understand spatial transformation. The HDA published an action research report analysing spatial transformation in one of the government's housing programmes, the Integrated Residential Development Programme (IRDP), analysing four case studies (HDA, 2017a). One of the outputs of the action research report was a list of indicators for measuring spatial transformation. The indicators were subsequently extensively consulted with numerous public, private, and academic sector stakeholders. From stakeholders' engagements, in 2018/19, the unit designed and developed the Spatial Transformation Planning Tool (STPT) to assess housing projects classified as catalytic. Catalytic projects are intended to be high-impact, sustainable and integrated mega-human settlement projects (HDA, 2017b). More recently, in 2019/2020, to give effect to the HDA regulations (HDA, 2014b) on PDAs (Priority Development Areas), the unit developed a monitoring and evaluation approach for PDAs [previously known as Priority Housing Development Areas (PHDAs) or Priority Human Settlement Housing Development Areas (PHSHDAs)].

The scale of IRDP/Catalytic and that of PDAs is different. Hence, the indicators are various. Wong (2006) writes on spatial scales in relation to 'Indicators for Urban and Regional Planning', and explains that spatial scales and indicators have challenges, including inter-area variance decreases with larger boundaries, internal variability increases with larger scales, and reliance on one geographic scale to track deprivation has potential challenges when this is done over time. An appropriate spatial scale is needed to measure a particular deprivation (ibid). SACN (2016a) notes that the term spatial transformation has been used loosely with changeable and abstract meanings; it is envisioned that through an indicator focus and an exploration of different scales, spatial transformation can be measured and defined more comprehensively. Aligning to the same reasoning the HDA has drawn out indicators for IRDP/CP as a project-based scale and PDAs as an area-based scale (see Annexure A). These indicators were developed by examining the different scales' datasets, undertaking consultations, and determining envisioned outcomes.

The IRDP study developed the Spatial Transformation Scoring Tool (STST) as an **analysis tool** to understand the spatial transformation impact in selected IRDP projects, namely Lufhereng, Fleurhof, South Hills and Malibongwe Ridge (HDA, 2017a). For catalytic projects, the STST after numerous consultations, was adapted and renamed the Spatial Transformation Planning Tool (STPT) to monitor projects. The STPT is a **planning and monitoring tool** to monitor CP. A **monitoring and evaluation (M&E) approach** was developed for PDAs to monitor their change and progress. The strategy is heavily based on spatial analyses and visualised as infographics to depict change in the PDAs.

### 1.1. SPATIAL TRANSFORMATION IN IRDP PROJECTS

The IRDP was "initiated to facilitate and guide housing development that occurs in well-located areas that provide convenient access to urban amenities, including places of employment" (HDA, 2017a: 13). IRDP is a tool "for the planning and development of human settlements that include all the necessary land uses and housing types and price categories to become a truly integrated community" (ibid 13). The spatial transformation criteria scored change in the urban environment and used criteria around the land, integration, economic development and the like to measure transformation (HDA, 2017a). Four projects were assessed on these pillars; see previous publication (HDA, 2017a). The Spatial Transformation Planning Tool for CP was developed from this study.

### 1.2. STPT for CP

The STPT, developed by the M&E and KMRU, was used to assess Catalytic Projects (CP). The Catalytic Projects National Business Plan (HDA, 2016a: 13) quotes the Master Spatial Plan for Human Settlements (MSP), also known as the Spatial Investment Framework for Human Settlements (SIFHS), in the definition of a catalytic project:

> "National Priority human settlements catalytic projects can range from mega scale inclusionary neighbourhoods to seemingly small but high impact interventions. The underlying principle of all of these is that they are all spatially, economically and socially targeted interventions whose main objective is to intervene to deliberately restructure settlement patterns and impact on the environment".

The detailed criteria for selecting catalytic projects is included in Annexure B while the overarching criteria for prioritizing projects is included in Annexure E. From the assessments, it is noted that the scale of intervention in

terms of envisioned housing yield does vary across the different catalytic projects, and to assess the impact to spatial transformation, it is necessary to undertake a project-by-project assessment. The HDA has completed 23 project evaluations for CP (see complete list of evaluations on page 41). Based on the availability and accessibility of requisite data sets the HDA focused on 6 of the 10 pillars to undertake evaluations as well as identifying risks and mitigations (see page 42-43). From the evaluations, an illustrating example of scale impact is the comparison of 'Land Value Add' (which measures the existing amenities and services in terms of distance via Red Book provisions) and 'Integration' (which counts the existing and planned amenities and services with planned and current population increase via Red Book provisions). Where there is a high envisioned yield in the area for the project, 'integration' will have a lower score in terms of access to amenities and services, highlighting a red flag that where large-scale projects are implemented, there is a need to understand the impact in terms of population in the area.

The STPT has since evolved to encompass approximately 160 indicators within ten pillars (see Annexure A). The spatial transformation indicators aim to monitor change in the urban environment via the ten pillars. It was a tool that evolved and was adapted with the unit's interaction with project managers, town planners and other professionals in the sector. In essence, the STPT imbibes the following functions:

A **Planning Tool** that allows the HDA to convert Human Settlements **targets into achievements**

Alert the HDA re **Red Flags** and *when and where to Intervene*

Project **prioritization:** Stop working on the **wrong projects** and **reclassify**

Source of **comparative analyses** among projects

# Ten Pillars of Spatial Transformation


**±160 Indicators for Monitoring Catalytic Projects**

### 1.3. Monitoring and Evaluation Approach for Measuring Spatial Transformation in PDAs

Priority Development Areas (PDAs) [previously known as Priority Housing Development Areas (PHDAs) or Priority Human Settlement Housing Development Areas (PHSHDAs)] are intended to "support municipalities to prioritise housing development applications in terms of SPLUMA thus directing housing finance to areas that promote inclusive residential markets instead of further segregating people by race, age and gender" (NDHS, 2019a: 12). PDAs are outlined in the Housing Development Agency Act of 2008, under Section 7 (3) of the functions of the agency is to:

"(3) In performing its functions the Agency may –

(a) declare priority housing development areas for residential and community purposes in accordance with integrated development plans and provincial spatial development frameworks;
(b) develop and submit a development plan for such priority development areas as contemplated in subsection 1(a); and
(c) implement such measures as may be prescribed to fast-track housing development in the declared priority housing development areas."

(South Africa, Housing Development Agency Act, No 23 of 2008: 13)

In addition, in the PDA policy compiled by the HDA in 2014, it states the purpose of the PDA is "to accelerate delivery of sustainable human settlements for a broad range of income groups within an integrated mixed-use development as prioritised in the municipal integrated development plan" (HDA, 2014a: 8). This illustrates the policy intentions to accelerate, integrate and prioritise housing delivery in line with integrated development plans (IDP).

McKenna (2020: 13), in her assessment of PDAs, notes that the policy intended to "promote intergovernmental coordination and to align policies and budgets around the concerted and coordinated development of a particular geographic area". The assessment highlights a mixed evaluation of PDAs where some "reflects a stronger alignment between the project list and planning frameworks and objectives, while in other instances the selection of PHSHDA's implies a divergence of priorities" (ibid 16). McKenna also notes that even where there is synergy between housing projects and SDFs there is a lack of alignment with regard to the finer aspects of urban development principles such as "the design of the development, the interconnections with existing settlements, the overall functioning of the development" (ibid 18). As highlighted earlier, the M&E Approach for spatial transformation intends to bring greater attention to and measure these aspects to resolve discrepancies between housing delivery and urban planning logic.

The M&E Approach intends to evaluate spatial transformation and consolidation that assess the impact of spatial justice and spatial efficiency; access to accommodation, social, connective and economic infrastructure; and the delivery of various quality housing typologies as outlined in the framework (NDHS, 2019a). From the policy (HDA, 2014a), the principles of PDAs are outlined:

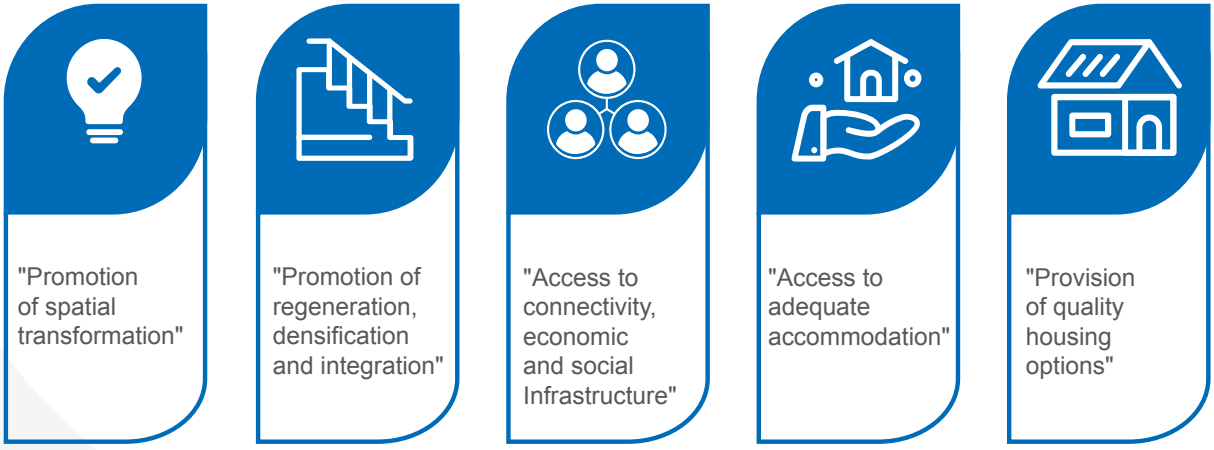



Figure 1: Principles of PDAs (HDA, 2014a: 13-14).

The outcomes that PDAs intend for spatial transformation and consolidation are:

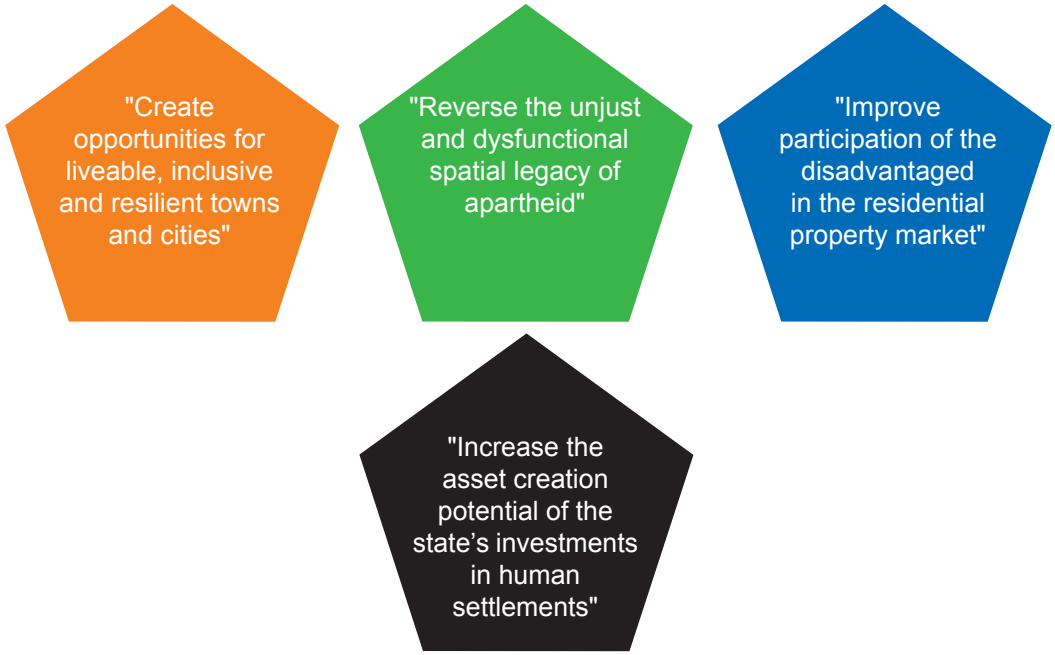



Figure 2: Outcomes of PDAs (NDHS & HDA, 2020: 9).

Thirteen pillars and corresponding indicators for spatial transformation have been derived from: the principles and outcomes of PDAs; research; knowledge of design principles; datasets; previous work and lessons on spatial transformation; and consultations (see Annexure A). The thirteen pillars have been linked to the outcomes. The Monitoring Approach for PDAs is included in Annexure C.

The diagram below explains the spatial transformation model for PDAs:

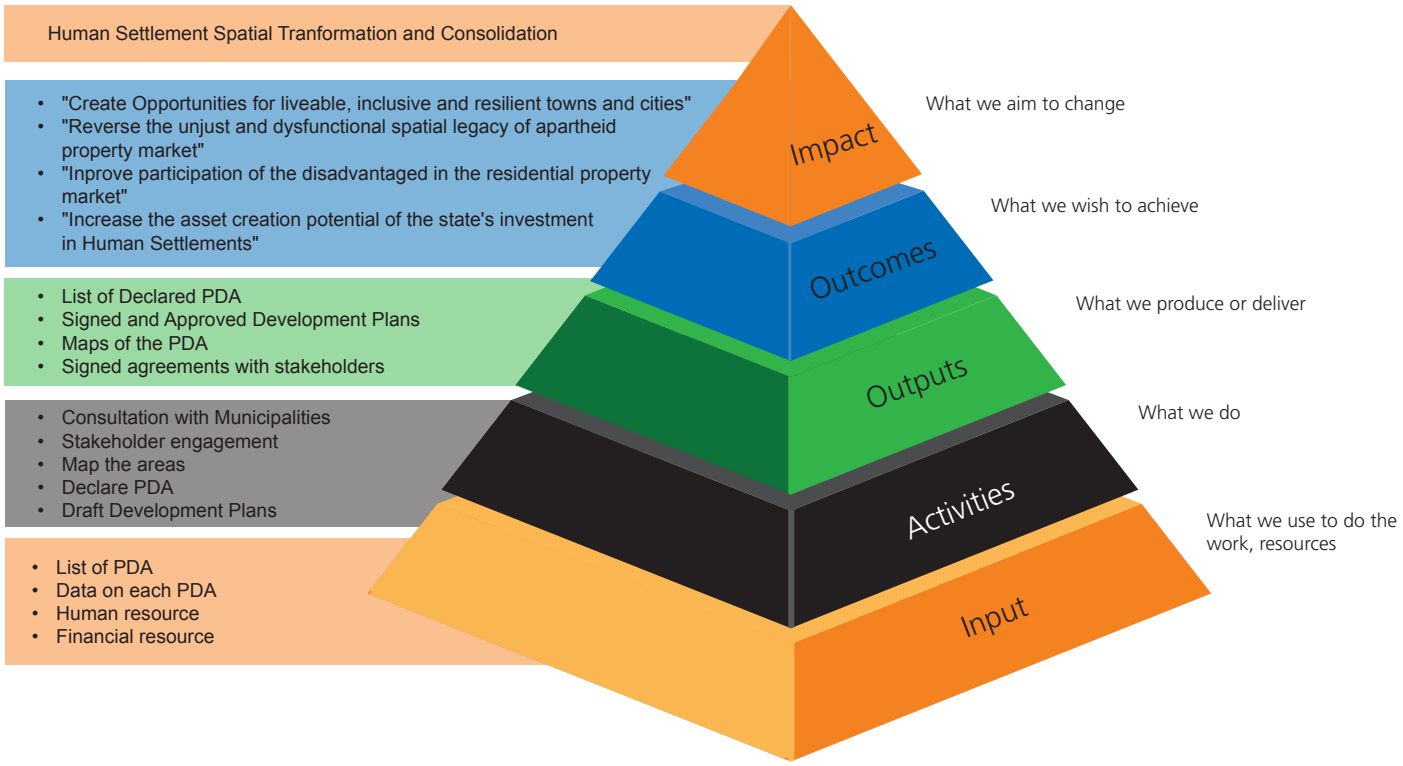



Figure 3: Spatial Transformation and Consolidation Model for PDAs (HDA, 2014a; NDHS & HDA, 2020: 9).

The 13 pillars for monitoring PDA's are illustrated below:

## Thirteen Pillars of Spatial Transformation


Thirteen Pillars of Spatial Transformation in PDAs.

The HDA based on the 13 pillars has undertaken analysis for 7 PDAs (see page 41 for complete list) and a baseline analysis of 'Port St Johns PDA' is on page 44. Baseline analysis is key in tracking change and monitoring patterns over time.

# BENCHMARKING INDICATORS

Maritz, Van Huyssteen, Le Roux, Pieterse, Ndaba, Mans and Ngidi (2016) explore spatial transformation in relation to sub-city indicators. They explain indicators in the South African spatial transformation context. Indicators for spatial transformation provide a means to measure spatial change; they "add value in providing some indication of embedded spatial patterns and the areas undergoing the biggest changes within cities…, and also in addressing questions related to the spatial relationships between such changes" (ibid 9). However, "[i]t should be acknowledged that spatial change can be depicted on numerous levels and that no one indicator can provide a clear indication of spatial transformation, experiences of people within cities, etc." (ibid 9).

According to SACN, the built environment has three defining elements: "land, settlements (i.e. physical buildings, infrastructure and services) and mobility systems (transport)", and there is a need to understand as well as transform these components for the improvement of the functioning of the city (SACN, 2016b: 62). According to the SACN (2016a), spatial transformation needs to be monitored with an outcome focus. SACN (2016a:76) highlights that "instead of measuring outputs (e.g. the number of houses, title deeds, land parcels or buses delivered), indicators need to be developed to measure the spatial outcomes and changes to the urban experience". This publication has developed indicators to monitor spatial outcomes and with regard to changes in the urban experience, the HDA has embarked on a digital capability to track beneficiary experience in the Beneficiary Experience Tracking Application (BETA). This measures quality of place, life and growth for recipients of human settlement subsidies (see forthcoming HDA publication on BETA).

Within the Spatial Transformation Planning Tool, there was a need to set parameters classifying the indicators in terms of green (good progress), amber (medium progress) or red (needs some work). Benchmarks have been set for the following pillars: Transversal Alignment, Land Value-Add, Integration and the Human Settlements Transformation Scorecard. The benchmarks were determined using the various standards available, including Red Book provisions, supply-chain policy and infrastructure standards. In 2019, the National Department of Human Settlements released the NPDG with revised standards, and subsequently, the unit updated the benchmarking document to reflect the new standards. See Annexure D, Benchmarks A reflects criteria from the previous red book and Benchmarks B reflects criteria from the current revised NPDG.

# TOWARDS A REFINEMENT OF METHODOLOGIES FOR GREATER SPATIAL TARGETING AND ANALYSIS

The Spatial Investment Framework for Human Settlements (SIFHS) recognises the need for spatial targeting in human settlements. It explains that it is “support directed to specific geographical areas, or to expected outcomes supported by fiscal programmes. It occurs at different scales, from national to provincial to regional, local and precinct level” (HDA, 2016c: 7). The criteria for prioritising projects in the SIFHS are included in Annexure E. Geographic Information Systems (GIS) processes and population density analysis provide methodologies to measure spatial transformation with particular regard to understanding access to services/amenities. The methods employed provide an area-based analysis of proximity and service to the population for amenities and services. The unit has been investigating a more targeted approach to analysing spatial transformation. This section explains current and new (currently exploring) methodologies.

For catalytic projects, two methodologies were used to understand the relationship between amenities and services – proximity and population catchment - as defined by the National Department of Housing’s Guidelines for Human Settlement Planning and Design (GHSPD – Previous Redbook) and subsequently the National Department’s NPDG (current Red Book) (CSIR, 2000; NDHS, 2019b). In Catalytic Projects, ‘Land Value Add’ measures the existing amenities and services (AfriGIS datasets) in terms of distance via Red Book provisions from the centroid of the project and ‘Integration’ estimates the current (AfriGIS datasets) and designed (Layout plans and Catalytic Projects Programme reports) amenities and services with planned and current population via Red Book provisions. 'Land Value Add' reflected a distance analysis with amenities and services from the centroid of the project. 'Integration' was a population analysis using the Enumeration Area with a 1km buffer population size (Stats SA, 2011) and an estimated population increase using planned households with the average household size per province from the Community Survey 2016 (Stats SA, 2016).

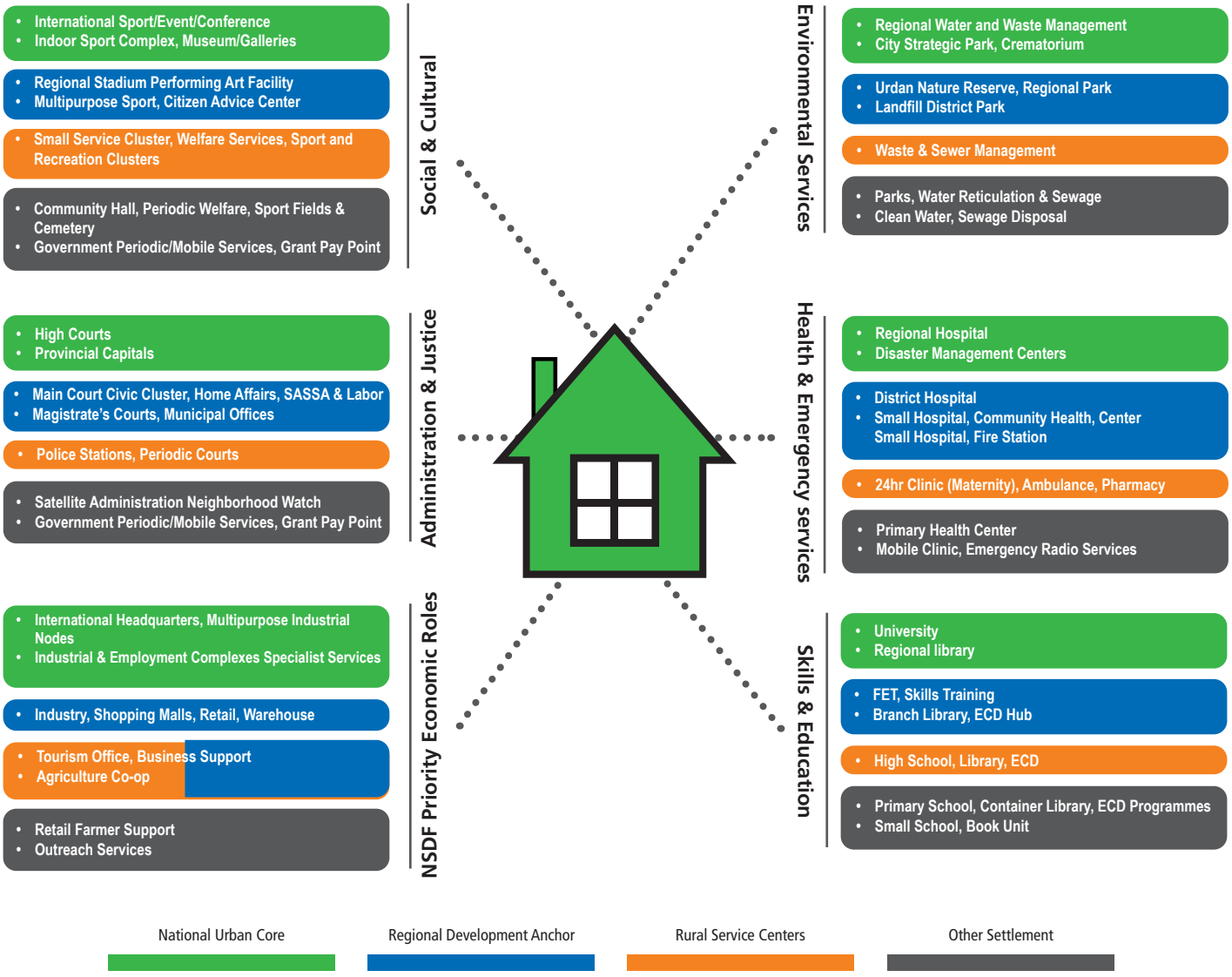
A population calculation for PDAs was used to determine sufficient amenities and services. The PDA analysis reflected the current population from the Geoterra Image – SA (GTI) (2020) data. The unit has experimented with adapted methodologies based on City of Johannesburg’s nodal review to measure spatial transformation and aims to investigate these methodologies for greater spatial targeting within PDAs. The COJ (2018) Nodal Review modelling exercise was used to “define the areas of greatest potential in the City for high-intensity urban development forming the evidence-based planning component” (COJ, 2018: 8). The analysis is based on "connectivity and access" on a hexagonal grid which measures 400m by 400m per hexagon (ibid 9). It used “current street networks and how they promote walkability, access to public transit stations, and various amenities. Importantly, it focused on walkability and public transit, rather than car use” (ibid 9). The scoring is based on the following methodology, “[t]he wider the area one can reach on foot from the centre of each cell, the higher the walkability score, and the more conducive that neighbourhood is to walking” (ibid 9).

Two methodologies have been applied to the hexagon approach: the first is walkability via the road network, and the second is walkability via the developable land index. The HDA has developed the Land Developable Index (LDI) and "is generated using spatial overlay methods based on data layers of the Geotechnical Hazard Index (slope and dolomite), Environmental Risk Index (rivers, wetlands, estuarine functional zones), Land Capability (existing plantations, afforestation potential, natural forest, existing field irrigation, agriculture potential, mining rights, mine dumps) and Ecological Infrastructure (ecosystem threat status, biodiversity planning, protected areas, habitat quality). These indices have various levels of developability and were therefore assigned different values on a 0-100 scale" (HDA, 2018a). Where the COJ (2018) Nodal Review developed an index for an urban potential model, this analysis looks at a specific amenity/service and accessibility to that amenity based on network analysis and developability assessment. This methodology and usefulness in understanding spatial transformation need further refining and interrogation to assist with spatial targeting.

# LESSONS LEARNT AND FUTURE RESEARCH OPPORTUNITIES

There were several lessons learnt working with the different tools to measure spatial transformation. Firstly, for catalytic projects, the type and quality of information received mainly depend on the role of the HDA. If the HDA is an implementing agent, more information is obtained because contractors and service providers will report to the HDA. In contrast, the data is limited if the HDA is a programme manager. In the future, there is a need to cement close relationships with implementing agents of different projects and municipalities to receive updated ground truth information. Secondly, catalytic projects are in various stages of development. It was, therefore, necessary to include the stage of the project and an overview of envisioned housing, housing typology breakdown, the opportunities for the financial year and the stakeholders to understand the dynamics of the individual projects. Thirdly, two methodological approaches were used for catalytic project analysis for amenities and services, referred to in the GHSPD and NPDG – distance and population (CSIR, 2000; NDHS, 2019b). Distance analysis analysed existing amenities and services, and population and expected population increase examined if amenities and services will service anticipated growth. This assists in identifying gaps in the provision of supporting amenities and noted that there is a need to plan for an increase in population for housing projects.

For benchmarks in catalytic projects and PDAs, the benchmarking criteria must be refined to apply to various contexts and projects. Currently, benchmarking criteria have been created for four pillars. There is an opportunity to extend the benchmarking process for better and complete assessments. Under transversal alignment for catalytic projects and PDAs, it is necessary to define which objective of the various policies it aligns to for greater specificity. The STPT measures transformation on a project level and the M&E approach for PDAs monitors on an area level. There is a need to refine criteria to ensure the measurement of spatial transformation in a city/town, including at a project and an area level. The recently released NSDF has outlined a set of criteria for social services at different scales of urban/rural areas (see image below). This could provide a helpful starting point for this level of assessment. In addition, as mentioned in the previous section, methodologies can be refined for greater spatial targeting.




Social Service Model, Source Adapted from: DALRRD, 2023: 99 (Extract from NSDF and reordered).

For many pillars, information is not necessarily standardised or available for example indicators under beneficiaries in catalytic projects such as race, income, education, and grants. The recording of these details is not standardised across provinces and is a challenge to obtain. Beneficiary management within the human settlements sector needs refinement and standardisation. In addition, only some of the information regarding the criteria in the tools is readily available. There is a need to review documentation, e.g. reports and layout plans, to obtain it. The work is tedious, laborious and slow. Relationships must be built with numerous committed stakeholders to design, develop and deploy a relevant paradigmatic tool to undertake comprehensive analyses across spheres and sectors.

With regard to PDA's the HDA has recently started a change detection exercise to monitor changes to key indicators over time (from 2020 to 2023). This will assist to understand the impact of state intervention in the Priority Development Areas.

# CONCLUSION

Maritz et al. (2016) mention that no single indicator can measure spatial transformation. There are limits to an indicator focus; there is a risk that an indicator focus creates a focus on a numerical or check box interpretation of the urban and may ignore some of the more subtle nuances of urban experience (SACN, 2016a), design and form. However, the various tools designed and used by the HDA have given us tools and scales to start adding definitions and understanding to spatial transformation. There is room for further investigation and expansion in the pillars and indicators explored, and this publication intends to open the scope and tools to measure and monitor spatial transformation in our projects, areas, towns, and cities.

The HDA envisions that the tools will be used by HDA employees, practitioners, government departments and other stakeholders in the urban environment. The HDA welcomes further engagement on methodologies, indicators and benchmarking.

***Note: 'Developing a Spatial Transformation Scoring Tool to Monitor South African Catalytic Housing Projects' was first delivered to the 55th ISOCARP Congress in Jakarta, Indonesia, in 2019.***

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**Geographic Information Systems (GIS) Contributions and References:**

The HDA GIS unit contributed to spatial transformation analysis, and the contribution of Hadley Remas, Zimasa Biyana, Nkanyiso Cele, Thabitha Patjane, Joseph Mangwezi and Pragasen Ponnen toward this publication is acknowledged.

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**Catalytic Data Engagements and Data Sources**

To populate the indicators of the spatial transformation analysis for catalytic project various sources were engaged including Catalytic Project Programme (CPP) submissions and reports, Project Officers and engagements with Project Teams in the various regional offices of the HDA, engagements with Catalytic Project Programme service provider, Project Reports, Company BEE Profiles, HDA Housing Market Dashboard, HDA GIS Calculations, layout plans and other general project information available.

**PDA M&E Framework Consultations**

Various consultations took place in creating the PDA Framework and we would like to acknowledge the contribution of the HDA PDA unit: Rashnee Atkinson (now NDHS), Mpho Mafinya and Mazwi Tladi; City of Johannesburg and Service Provider for Greater Alexandra PDA: Ayanda Ngcobo (COJ), Theo Pretorius (Plan Associates) and Herman Strydom (Plan Associates); National Department of Human Settlements M&E unit; and the various Provincial Forums led by the National Department of Human Settlements.

# Annexure A: Spatial Transformation Matrix

| Spatial Transformation Theme | IRDP (original spatial transformation indicators) | | | Catalytic Projects | | | PDAs | | |
|---|---|---|---|---|---|---|---|---|---|
| | Pillars | Project-level Indicator | Type of Measurement | Pillars | Project-level Indicator | Type of Measurement | Pillars | Area-level Indicator | Type of Measurement |
| Land | Land | Well located, affordable land based on the housing demand/ needs analysis that is suitable for human settlement development and the progressive upgrading of informal settlements | Scale of Achievement 0 -2 | Land Value Add (Existing) | Number. of approved beneficiaries (child headed HH, senior citizen HH, military veterans included) | Number | Land | Current number of Residential Units in the Area | Number |
| | | The use of State Owned Land for human settlement development and the progressive upgrading of informal settlements | Scale of Achievement 0 -2 | | Number of non-qualifiers | Number | | Land size of the PDA | Number in Hectares |
| | | Land that meets the strategic priorities of the human settlements mandate and that can be used to catalyse private sector investment at a precinct and/or regional scale | Scale of Achievement 0 -2 | | Number of hectares of developable state owned land available for human settlements developments | Number in Hectares | | Informal Settlements in the Area | Number |
| | | | | | Number of hectares of vacant developable private owned land available for human settlements developments | Number in Hectares | | Vacant Land Ownership within PDA. (Hectares) | Number in Hectares |
| | | | | | Number of Early Childhood Development Centers | Number: Analysed through benchmarking [Distance] | | Vacant Land in Developable Areas | Number in Hectares |
| | | | | | Number of Primary Schools | Number: Analysed through benchmarking [Distance] | | Are there any land within the PDA that are under claims | Yes/No |
| | | | | | Number of Secondary Schools | Number: Analysed through benchmarking [Distance] | | Please provide details of the current land claims under way? | Open-Ended |
| | | | | | Number of Tertiary Facilities | Number: Analysed through benchmarking [Distance] | | How much land is developable in the PDA? (Hectares) | Number in Hectares |
| | | | | | Number of Primary Health Care Clinics | Number: Analysed through benchmarking [Distance] | | From the land identified what is the stage of development readiness (what phase in the town planning processes is the land in)? [If land is in different phases, please expand and elaborate] | Open-Ended |

| Spatial Transformation Theme | IRDP (original spatial transformation indicators) | | | Catalytic Projects | | | PDAs | | |
|---|---|---|---|---|---|---|---|---|---|
| | Pillars | Project-level Indicator | Type of Measurement | Pillars | Project-level Indicator | Type of Measurement | Pillars | Area-level Indicator | Type of Measurement |
| Land | | | | Land Value Add (Existing) | Number of Hospitals | Number: Analysed through benchmarking [Distance] | Land | What are security measures are in place to protect againsts land and/or house invasions? [Where projects are in planning and implementation] | Open-Ended |
| | | | | | Number of Libraries | Number: Analysed through benchmarking [Distance] | | Does the PDA fall within the Urban Development Boundary? | Yes/No |
| | | | | | Number of Community Centres/ Halls | Number: Analysed through benchmarking [Distance] | Mixed Land Use | Number of Residential Structures | Number |
| | | | | | Number of Multi-Purpose Centers | Number: Analysed through benchmarking [Distance] | | Number of Commercial Structures | Number |
| | | | | | Number of Department of Home Affairs Offices | Number: Analysed through benchmarking [Distance] | | Number of Community Service Structures | Number |
| | | | | | Number of Department of Labour Offices | Number: Analysed through benchmarking [Distance] | | Number of Educational Structures | Number |
| | | | | | Number of Department of Social Development Offices | Number: Analysed through benchmarking [Distance] | | Number of Health Care Facilities Structures | Number |
| | | | | | Number of SASSA Offices | Number: Analysed through benchmarking [Distance] | | Number of Industrial Structures | Number |
| | | | | | Number of Social Grant Pay Points | Number: Analysed through benchmarking [Distance] | | Number of Institutional Structures | Number |
| | | | | | Number of Police Stations | Number: Analysed through benchmarking [Distance] | | Number of Mining Structures | Number |
| | | | | | Number of Fire Stations | Number: Analysed through benchmarking [Distance] | | Number of Recreation and Leisure Structures | Number |
| | | | | | Number of Homes for the Aged | Number: Analysed through benchmarking [Distance] | | Number of Transport Structures | Number |
| | | | | | Number of Child and Youth Care Centres | Number: Analysed through benchmarking [Distance] | | Number of Utilities and Infrastructure Structures | Number |
| | | | | | Number of Post Offices | Number: Analysed through benchmarking [Distance] | | Unclassified | Number |

| Spatial Transformation Theme | IRDP (original spatial transformation indicators) | | | Catalytic Projects | | | PDAs | | |
|---|---|---|---|---|---|---|---|---|---|
| | Pillars | Project-level Indicator | Type of Measurement | Pillars | Project-level Indicator | Type of Measurement | Pillars | Area-level Indicator | Type of Measurement |
| Land | | | | Land Value Add (Existing) | Number of ICT Hubs | Number: Analysed through benchmarking [Distance] | Infrastructure | What are the water and sewer capacities in the area? | Open-Ended |
| | | | | | Number of shopping complexes | Number | | What is the electricity capacity in the area? | Open-Ended |
| | | | | | Number of title deeds issued | Number | | What is the condition and capacity of the road infrastructure in the area? | Open-Ended |
| | | | | | Percentage of title deeds issued to women | Percentage Number | | What is the refuse removal capacity in the area? | Open-Ended |
| | | | | | Is there existing bulk water and sewer? | Open-Ended | | What is the capacity and accessibility of the ICT infrastructure? | Open-Ended |
| | | | | | Is there existing bulk electricity? | Open-Ended | | | |
| | | | | | Is there existing road infrastructure? | Open-Ended | | | |
| | | | | | Is there existing ICT infrastructure? | Open-Ended | | | |
| | | | | | Is there infrastructure upgrading required? | Yes/No | | | |
| | | | | | Number of households living in informal settlement | Number | | | |
| | | | | | Number of approved beneficiaries (child headed HH, senior citizen HH, military veterans included) | Number | | | |
| | | | | | Number of non-qualifiers | Number | | | |
| | | | | | Number of hectares of developable state owned land available for upgrading of informal settlements | Number in Hectares | | | |
| | | | | | Number of hectares of vacant developable private owned land available for upgrading of informal settlements | Number in Hectares | | | |
| | | | | | Number of stands zoned for open market residential use | Number | | | |
| | | | | | Percentage of stands zoned for open market residential use and owned by private sector | Percentage Number | | | |
| | | | | | Number of stands zoned for commercial use | Number | | | |

| Spatial Transformation Theme | IRDP (original spatial transformation indicators) | | | Catalytic Projects | | | PDAs | | |
|---|---|---|---|---|---|---|---|---|---|
| | Pillars | Project-level Indicator | Type of Measurement | Pillars | Project-level Indicator | Type of Measurement | Pillars | Area-level Indicator | Type of Measurement |
| Land | | | | Land Value Add (Existing) | Percentage of stands zoned for commercial use and owned by private sector | Percentage Number | | | |
| | | | | | Number of stands zoned for industrial use | Number | | | |
| | | | | | Percentage of stands zoned for industrial use and owned by private sector | Percentage Number | | | |
| | | | | | Number of stands zoned for institutional use | Number | | | |
| | | | | | Percentage of stands zoned for institutional use and owned by private sector | Percentage Number | | | |
| Integration | Integration | Access to Transport Systems (public transport and transport networks) that allow residents to move freely between different parts of the City | Scale of Achievement 0 -2 | Integration (Planned) | Number of Early Childhood Development Centers | Number: Analysed through benchmarking [Population] | Amenities and Services | Number of Early Childhood Development Centers | Number: Analysed through benchmarking [Population] |
| | | Access to Health, Educational and Recreational amenities and services that promote sustainable communities and neighbourhoods | Scale of Achievement 0 -2 | | Number of Primary Schools | Number: Analysed through benchmarking [Population] | | Number of Primary Schools | Number: Analysed through benchmarking [Population] |
| | | Integrating the disparate parts of the city including marginalised areas that re-dress the existing spatial legacy | Scale of Achievement 0 -2 | | Number of Secondary Schools | Number: Analysed through benchmarking [Population] | | Number of Secondary Schools | Number: Analysed through benchmarking [Population] |
| | | Integration with existing urban fabric and existing infrastructure | Scale of Achievement 0 -2 | | Number of Tertiary Facilities | Number: Analysed through benchmarking [Population] | | Number of Tertiary Facilities | Number: Analysed through benchmarking [Population] |
| | | | | | Number of Primary Health Care Clinics | Number: Analysed through benchmarking [Population] | | Number of Primary Health Care Clinics | Number: Analysed through benchmarking [Population] |
| | | | | | Number of Hospitals | Number: Analysed through benchmarking [Population] | | Number of Hospitals | Number: Analysed through benchmarking [Population] |
| | | | | | Number of Libraries | Number: Analysed through benchmarking [Population] | | Number of Libraries | Number: Analysed through benchmarking [Population] |

| Spatial Transformation Theme | IRDP (original spatial transformation indicators) | | | Catalytic Projects | | | PDAs | | |
|---|---|---|---|---|---|---|---|---|---|
| | Pillars | Project-level Indicator | Type of Measurement | Pillars | Project-level Indicator | Type of Measurement | Pillars | Area-level Indicator | Type of Measurement |
| Integration | | | | Integration (Planned) | Number of Community Centres/ Halls | Number: Analysed through benchmarking [Population] | Amenities and Services | Number of Community Centres/Halls | Number: Analysed through benchmarking [Population] |
| | | | | | Number of Multi-Purpose Centers | Number: Analysed through benchmarking [Population] | | Number of Multi-Purpose Centers | Number: Analysed through benchmarking [Population] |
| | | | | | Number of Department of Home Affairs Offices | Number: Analysed through benchmarking [Population] | | Number of Department of Home Affairs Offices | Number: Analysed through benchmarking [Population] |
| | | | | | Number of Department of Labour Offices | Number: Analysed through benchmarking [Population] | | Number of Department of Labour Offices | Number: Analysed through benchmarking [Population] |
| | | | | | Number of Department of Social Development Offices | Number: Analysed through benchmarking [Population] | | Number of Department of Social Development Offices | Number: Analysed through benchmarking [Population] |
| | | | | | Number of SASSA Offices | Number: Analysed through benchmarking [Population] | | Number of SASSA Offices | Number: Analysed through benchmarking [Population] |
| | | | | | Number of Social Grant Pay Points | Number: Analysed through benchmarking [Population] | | Number of Social Grant Pay Points | Number: Analysed through benchmarking [Population] |
| | | | | | Number of Police Stations | Number: Analysed through benchmarking [Population] | | Number of Police Stations | Number: Analysed through benchmarking [Population] |
| | | | | | Number of Fire Stations | Number: Analysed through benchmarking [Population] | | Number of Fire Stations | Number: Analysed through benchmarking [Population] |
| | | | | | Number of Homes for the Aged | Number: Analysed through benchmarking [Population] | | Number of Homes for the Aged | Number: Analysed through benchmarking [Population] |
| | | | | | Number of Child and Youth Care Centres | Number: Analysed through benchmarking [Population] | | Number of Child and Youth Care Centres | Number: Analysed through benchmarking [Population] |

| Spatial Transformation Theme | IRDP (original spatial transformation indicators) | | | Catalytic Projects | | | PDAs | | |
|---|---|---|---|---|---|---|---|---|---|
| | Pillars | Project-level Indicator | Type of Measurement | Pillars | Project-level Indicator | Type of Measurement | Pillars | Area-level Indicator | Type of Measurement |
| Integration | | | | Integration (Planned) | Number of Post Offices | Number: Analysed through benchmarking [Population] | | Number of Post Offices | Number: Analysed through benchmarking [Population] |
| | | | | | Number of ICT Hubs | Number: Analysed through benchmarking [Population] | | Number of ICT Hubs | Number: Analysed through benchmarking [Population] |
| | | | | | Number of shopping complexes: | Number | Transport Networks | What are the different modes of public transport in the area? | Open-Ended |
| | | | | | Number of transport nodes within the precinct | Number | | How many transport stops are in the area? | Number |
| | | | | | Number of public modes of transport available | Number | | How many suburbs in the PDA are serviced by transport stops? | Percentage Number |
| | | | | | Number of units catering for universal access (people with disability) | Number | | Is there adequate NMT infrastructure? | Open-Ended |
| | | | | | Length of roads with bicycle lanes | Number | | | |
| | | | | | Length of roads with walkways | Number | | | |
| | | | | | Are there rail networks linking various parts of the precinct? | Yes/No | | | |
| | | | | | Is there planned bulk water and sewer? | Yes/No | | | |
| | | | | | Is there planned bulk electricity? | Yes/No | | | |
| | | | | | Is there planned road infrastructure? | Yes/No | | | |
| | | | | | Is there planned ICT infrastructure? | Yes/No | | | |
| | | | | | Is there infrastructure upgrading required? | Yes/No | | | |
| | | | | | Total benefeciaries: | Number | | | |
| | | | | | No of non-qualifiers: | Number | | | |
| | | | | | Beneficiaries (race) | Number | | | |
| | | | | | Beneficiaries (income) | Number | | | |
| | | | | | Beneficiaries (education) | Number | | | |
| | | | | | Beneficiaries (grants) | Number | | | |

| Spatial Transformation Theme | IRDP (original spatial transformation indicators) | | | Catalytic Projects | | | PDAs | | |
|---|---|---|---|---|---|---|---|---|---|
| | Pillars | Project-level Indicator | Type of Measurement | Pillars | Project-level Indicator | Type of Measurement | Pillars | Area-level Indicator | Type of Measurement |
| Socio-Economics | "Economic Development" | A dedicated Local Economic Development Plan that promotes localised economic development throughout the project life cycle | Scale of Achievement 0 -2 | Socio-Economic Development | Is there a local socio-economic development plan? | Yes/No | Socio-Economics | What is the total population of the area? | Number |
| | | Identification of Economic Sites for sustainable economic development | Scale of Achievement 0 -2 | | Number of stands to advance township economies | Number | | What is the income distribution of households in the PDA? [Annual] | Number |
| | | Access to Economic Opportunities through the provision of economic sites and services at project and precinct level | Scale of Achievement 0 -2 | | Are spaces allocated for localised economic development within public transport nodes? | Yes/No | | Has there been a socio-economic survey of the PDA and/or parts of the PDA? | Yes/No |
| | | Access to informal economic opportunities through the provision of sites for informal economic integration (informal trading areas, taxi ranks) | Scale of Achievement 0 -2 | | Number of new SMME created (Projects) | Number | Economic Development and Job Creation | What is the main economic activity of the PDA? (where are people generally employed e.g. Mining, Industry, Serve a major economic node) | Open-Ended |
| | | | | | Number of new SMME created (Planned) | Number | | Are there SMMEs in the area? What are the challenges and opportunities for SMMEs in the PDA? | Open-Ended |
| | | | | | Number of additional jobs created | Number | | Is there adequate spaces allocated for the informal sector and spaces for upscaling? | Open-Ended |
| | | | | | Is space available for informal trade on walkways? | Yes/No | | Are the new spaces for different economic activities in the PDA (Retail, Industrial, Business etc)? | Open-Ended |
| | | | | | Evidence of food production and security (roof top gardens, urban farming etc.) | Yes/No | | What are the employment levels of the PDA? (Formal) | Number |
| | | | | Return on Investment | What is the project cash flow and different funding/financing streams? | Number | | What are the employment levels of the PDA? (Informal) | Number |
| | | | | | What is the ratio of the total expenditures (operations, maintenance and capital) | Number | | What are the unemployment levels of the PDA? | Number |
| | | | | | What is the interest on borrowed funds to date? | Number | | | |
| | | | | | What is the amount of funds granted and used? | Number | | | |
| | | | | | What is the net profit/loss margin? | Number | | | |

| Spatial Transformation Theme | IRDP (original spatial transformation indicators) | | | Catalytic Projects | | | PDAs | | |
|---|---|---|---|---|---|---|---|---|---|
| | Pillars | Project-level Indicator | Type of Measurement | Pillars | Project-level Indicator | Type of Measurement | Pillars | Area-level Indicator | Type of Measurement |
| Transversal Alignment | Transversal Alignment | Alignment with the National DHS strategic objectives contained in the Medium Term Strategic Framework (MTSF) | Scale of Achievement 0 -2 | Transversal Alignment | Is the project aligned with the strategic MTSF objectives? | Yes/No | Transversal Alignment | What roadblocks need to be unblocked for PDA implementation? [E.g. Sectoral Alignment, Transversal Alignment] | Open-Ended |
| | | Alignment with the Provincial strategic objectives contained in the Provincial Growth Strategy | Scale of Achievement 0 -2 | | Is the project aligned with the Provincial Strategic Objectives? | Yes/No | | | |
| | | Alignment with the local government spatial plans such as the Integrated Development Plan (IDP), the Spatial Development Framework (SDF) and the Built Environment Performance Plan (BEPP) (BEPP is Metro Specific) | Scale of Achievement 0 -2 | | Is the project within a declared PDA? | Yes/No | | | |
| | | | | | Is the project aligned with Local Government Plans e.g. IDP, SDF, BEPP (BEPP - Metros)? | Yes/No | | | |
| Urban Management | Urban Management | A project specific Urban Management Plan (UMP) for the human settlement development | Scale of Achievement 0 -2 | Urban Management | Was urban management and maintenance reserve fund factored in? | Yes/No | Urban Management | What plans are there for urban management in the area during and post implementation? | Open-Ended |
| | | Urban Management Capacitation in terms of resource mobilisation and capacity of the municipality to provide urban management services over the life cycle of the development | Scale of Achievement 0 -2 | | Is the project part of the municipality's UMP? | Yes/No | | What plans are there for building maintenence and beneficiary education? | Open-Ended |
| | | Building and Precinct Maintenance Plan to promote sustainable neighbourhood development | Scale of Achievement 0 -2 | | Does the municipality have financial capacity to provide urban management services after project handover? | Yes/No | | | |
| | | Budget Provision for Urban Management and Maintenance (building and precinct level) over the life cycle of the development | Scale of Achievement 0 -2 | | Does the municipality have institutional capacity to provide urban management services after project handover? | Yes/No | | | |
| | | | | | Does the project have a building maintenance plan? | Yes/No | | | |
| | | | | | Have beneficiaries received education about maintaining their residential units post handover? | Yes/No | | | |

| Spatial Transformation Theme | IRDP (original spatial transformation indicators) | | | Catalytic Projects | | | PDAs | | |
|---|---|---|---|---|---|---|---|---|---|
| | Pillars | Project-level Indicator | Type of Measurement | Pillars | Project-level Indicator | Type of Measurement | Pillars | Area-level Indicator | Type of Measurement |
| Urban Management | | | | Urban Management | Does the municipality have a Precinct Maintenance Plan? | Yes/No | | | |
| | | | | | Does the municipality have financial capacity to provide precinct management services after project handover? | Yes/No | | | |
| | | | | | Does the municipality have institutional capacity to provide precinct management services after project handover? | Yes/No | | | |
| Quality, Climate Change Resilience & Social Cohesion | Quality | Innovative Urban Design that promotes inclusivity, efficient land uses and environmental and social sustainability | Scale of Achievement 0 -2 | Quality | What types of Innovative Technologies are Installed? | Open-Ended | Climate Change Resilience and the Natural Environment | What are number of units fitted with innovative technology? | Number |
| | | Densification and Compaction that promotes improved density across the development | Scale of Achievement 0 -2 | | Number of units fitted with innovative technologies | Number | | What are the natural environment consideration in the area? | Open-Ended |
| | | Typology and Tenure Mix that provides a range of housing types and tenure | Scale of Achievement 0 -2 | | Number of Solar panels installed | Number | | What are the initiatives to encourage food security? | Open-Ended |
| | | Common Level of Public Façade that promotes a single level of public treatment such as sidewalks, street lighting, landscaping and curbing | Scale of Achievement 0 -2 | | Number of water harvesting tanks installed | Number | | What are the initiatives to protect vulnerable/ecologically sensitive areas | Open-Ended |
| | | | | | Number of units per hectare (Density) | Number: Units per hectare | | Have EIA's been conducted in the area? | Yes/No |
| | | | | | | | Social Cohesion and Benefit | What are the design and planning initiatives to encourage social cohesion and benefit? E.g. Good public places, mixed use spaces and mixed typologies | Open-Ended |
| | | | | | | | | What engagements are being undertaken so that leaders, communities, and other interested parties on-the-ground are involved in the design and planning of the PDA? | Open-Ended |
| | | | | | | | | What identified community needs are being incorporated into the plan? | Open-Ended |

| Spatial Transformation Theme | IRDP (original spatial transformation indicators) | | | Catalytic Projects | | | PDAs | | |
|---|---|---|---|---|---|---|---|---|---|
| | Pillars | Project-level Indicator | Type of Measurement | Pillars | Project-level Indicator | Type of Measurement | Pillars | Area-level Indicator | Type of Measurement |
| Quality, Climate Change Resilience & Social Cohesion | | | | | | | Housing and Density | How many housing typologies are planned in this area? [Social Housing, BNG, Student Housing, FLISP, CRU, Open Market etc] | Number |
| | | | | | | | | Are housing opportunities linked to beneficiaries and title deed distribution? | Open-Ended |
| | | | | | | | | What are the current densities of the PDA area? | Number: Units per hectare |
| Public Safety | Public Safety | Sites for SAPS and Emergency Services | Scale of Achievement 0 -2 | Public Safety | How many SAPS sites are available within the precinct? | Number | | | |
| | | Active Police Station, Fire Station | Scale of Achievement 0 -2 | | How many firestations are within the precinct? | Number | | | |
| | | Safety/Security Measures (perimeter fencing, private security services) | Scale of Achievement 0 -2 | | How many SAPS stations are within the precinct? | Number | | | |
| | | | | | Are there measures in place to protect the land from invasions? [Where projects are in planning and implementation] | Yes/No | | | |
| | | | | | Are there measures in place to protect the development from illegal occupation? [Where projects are in planning and implementation] | Yes/No | | | |
| | | | | | Are there measures in place to protect the precinct? | Yes/No | | | |

| Spatial Transformation Theme | IRDP (original spatial transformation indicators) | | | Catalytic Projects | | | PDAs | | |
|---|---|---|---|---|---|---|---|---|---|
| | Pillars | Project-level Indicator | Type of Measurement | Pillars | Project-level Indicator | Type of Measurement | Pillars | Area-level Indicator | Type of Measurement |
| Functional and equitable residential property markets | | | | Functional and equitable residential property markets | Is there a housing options available for BNG? How many? | Number | Property Market | What is the property profile of the PDA? (types of property, rate of transactions, average transaction value, percentage bonded transactions etc.) | |
| | | | | | Is there a housing options available for FLISP? How many? | Number | | Number of residential properties | Number |
| | | | | | Is there a housing options available for Social housing? How many? | Number | | Value of residential properties | Number |
| | | | | | Is there a housing options available for CRU? How many? | Number | | Average property value | Number |
| | | | | | Is there Free/Open market housing? How many? | Number | | Number of residential transactions | Number |
| | | | | | Number of EPHP beneficiaries in the project? | Number | | Percent transactions bonded | Percentage Number |
| | | | | | Number of emergency housing beneficiaries in the project? | Number | | Percent new transactions bonded | Percentage Number |
| | | | | | Number of GEHS beneficiaries in the project? | Number | | New transactions | Number |
| | | | | | Number of loans to government sponsored properties in the precinct? | Number | | Repeat transactions | Number |
| | | | | | Number of loans/subsidies granted to beneficiairies by private banks? | Number | | Percent repeat transactions | Percentage Number |
| | | | | | Number of beneficiaries not granted a loan? | Number | | Average transaction price | Number |
| | | | | | No of residential properties | Number | | Number of bonded transactions | Number |
| | | | | | Value of residential properties | Number | | Number of bank loans in the area | Number |
| | | | | | Average property value | Number | | | |
| | | | | | Number of residential ` transactions | Number | | | |
| | | | | | Percent transactions bonded | Percentage Number | | | |
| | | | | | Percent new transactions bonded | Percentage Number | | | |
| | | | | | New transactions | Number | | | |
| | | | | | Repeat transactions | Number | | | |

| Spatial Transformation Theme | IRDP (original spatial transformation indicators) | | | Catalytic Projects | | | PDAs | | |
|---|---|---|---|---|---|---|---|---|---|
| | Pillars | Project-level Indicator | Type of Measurement | Pillars | Project-level Indicator | Type of Measurement | Pillars | Area-level Indicator | Type of Measurement |
| | | | | | Percent repeat transactions | Percentage Number | | | |
| | | | | | Average transaction price | Number | | | |
| | | | | | Number of bonded transactions | Number | | | |
| | | | | | Number of bank loans in the area | Number | | | |
| Human Settlements Transformation Scorecard | | | | Human Settlements Transformation Scorecard | Developer BEE | | | | |
| | | | | | BEE compliant | Levels: Analysed through benchmarking | | | |
| | | | | | Percentage black ownership | Percentage: Analysed through benchmarking | | | |
| | | | | | Percentage youth ownership | Percentage: Analysed through benchmarking | | | |
| | | | | | Percentage women ownership | Percentage: Analysed through benchmarking | | | |
| | | | | | Percentage disabled ownership | Percentage: Analysed through benchmarking | | | |
| | | | | | Percentage military vets ownership | Percentage: Analysed through benchmarking | | | |
| | | | | | Women empowerment | | | | |
| | | | | | Number of women owned entities (supplier, contractor, developer etc.) | Number | | | |
| | | | | | Number of females trained | Number | | | |
| | | | | | Cost of training | Number | | | |
| | | | | | Number of EPWP employment opportunities for females | Number | | | |
| | | | | | Number of mortgage loans for females | Number | | | |
| | | | | | Value of loans for females | Number | | | |
| | | | | | Youth empowerment | | | | |
| | | | | | Number of youth owned entities (supplier, contractor, developer etc.) | Number | | | |

| Spatial Transformation Theme | IRDP (original spatial transformation indicators) | | | Catalytic Projects | | | PDAs | | |
|---|---|---|---|---|---|---|---|---|---|
| | Pillars | Project-level Indicator | Type of Measurement | Pillars | Project-level Indicator | Type of Measurement | Pillars | Area-level Indicator | Type of Measurement |
| Human Settlements Transformation Scorecard | | | | Human Settlements Transformation Scorecard | Number of youth persons trained on site | Number | | | |
| | | | | | Number of EPWP employment opportunities created for youth | Number | | | |
| | | | | | Cost of training | Number | | | |
| | | | | | Disabled persons: | | | | |
| | | | | | Number of disabled owned entities | Number | | | |
| | | | | | Number of disabled persons trained on site | Number | | | |
| | | | | | Number of EPWP employment opportunities created for disabled persons | Number | | | |
| | | | | | Cost of training | Number | | | |
| | | | | | Supplier Transformation (Product and Service Suppliers) | | | | |
| | | | | | BEE compliant | Levels: Analysed through benchmarking | | | |
| | | | | | Percentage black ownership | Percentage: Analysed through benchmarking | | | |
| | | | | | Percentage woman ownership | Percentage: Analysed through benchmarking | | | |
| | | | | | Number of suppliers within project | Number | | | |
| | | | | | Contractors Transformation | | | | |
| | | | | | Number of jobs created for residents of local communities | Number | | | |
| | | | | | BEE compliant | Levels: Analysed through benchmarking | | | |
| | | | | | Percentage black ownership | Percentage: Analysed through benchmarking | | | |
| | | | | | Percentage woman ownership | Percentage: Analysed through benchmarking | | | |

Sources
IRDP: Extract from HDA, (2017a): 28-29
Catalytic Projects: Derived from various sources including CSIR (2000), HDA (2017a), HDA (2017c), HDA (2017d), HDA (2018b), NDHS (2019b), consultations and engagements (see section 'Evolution of Scale and Tools' for methodology). PDAs: Derived from various sources including Dudley et al (2010), StatsSA (2011), HDA (2014a), Schupbach (2015), SACN (2016a), SACN (2016b), HDA (2018a), Rosenburg (2020), Schreiber (n.d), GTI-SA and AfriGIS datasets, previous work on spatial transformation, engagements and consultations (see consultations in reference list).

# Annexure B: Catalytic Selection Scoring Tool

| Project | |
|---|---|
| Project Scoring | - |

Project Catalytic Scoring Summary:

| Criteria | Criteria Weight | Criteria Score (out of 100) | Score |
|---|---|---|---|
| Critical Regional Mass | 10 | - | - |
| Site Selection & Innovation | 15 | - | - |
| Built Environment Capacity | 30 | - | - |
| Supply & Demand | 25 | - | - |
| Innovation & Catalytic | 35 | - | - |
| Economic Activity | 40 | - | - |
| TOTAL | 155 | - | - |

| Criteria | Criteria Weight | Criteria Score (out of 100) | Score (out of weight criteria total) | Criteria | Score Allo-cated (0 to 4) | Weight Breakdown (Total must equal 100%) | Points (based on score allocated) | Score | Scoring Guidelines |
|---|---|---|---|---|---|---|---|---|---|
| 1. Critical Regional Mass (Number of housing opportunities, options & contribution to densities) | 10 | 0 | 0 | 1. Critical Regional Mass | 0 | 100% | 0 | 0 | |
| | | | | 1.1. Does the project offer scale delivery of housing opportunities? | | 25% | 0 | 0 | Number of housing opportunities. Scoring:<br>0: Less than 5000<br>1: 5,000 to 7,500<br>2: 7,500 to 10,000<br>3: 10,000 to 15,000<br>4: 15,000+ |
| | | | | 1.2. Does the project offer a variety of housing typologies (built products: single, multi-storey/detached, semi-detached)? | | 25% | 0 | 0 | Number of housing typologies options. Scoring:<br>0: Only 1 option<br>2: 2 options<br>4: 3 and more options |
| | | | | 1.3. Does the project offer a variety of housing options (ownership, rental/government subsidised, private funding etc.) | | 25% | 0 | 0 | Number of housing options. Scoring:<br>0: Only 1 option<br>2: 2 options<br>4: 3 and more options |
| | | | | 1.4. Does the project offer the minimum net density (60du/ha) | | 25% | 0 | 0 | Scoring:<br>0: Less than 60 du/ha<br>1: 60 - 80 du/ha<br>2: 80 - 100 du/ha<br>3: 100 - 120 du/ha<br>4: 120 du/ha and more |
| 2. Site selection & Innovation (Planned facilities & inclusion in IDP) | 15 | 0 | 0 | 2. Site selection & Innovation | 0 | 100% | 0 | 0 | |
| | | | | 2.1. Does the project integrate with the existing government investment in terms of infrastructure (proximity to or use of existing bulk infrastructure) | | 20% | 0 | 0 | Scoring:<br>0: No, project is far from existing bulk infrastructure<br>4: Yes, the project links with existing bulk infrastructure |
| | | | | 2.2. Does the project integrate with the existing government investment in terms of social amenities (schools, health centres, parks and other government-funded amenities) | | 20% | 0 | 0 | Scoring:<br>0: No - requires additional social facilities not included in the project<br>2: Yes - additional facilities required are partially provided for<br>4: Yes - additional facilities required and provided for |
| | | | | 2.3. Is the project included in or reflective of the goals and intentions of local SDF, IDP plans and MTSF targets? | | 20% | 0 | 0 | Scoring:<br>0: No<br>2: Partially, included in SDF and IDP but not MTSF / Included in MTSF but not IDP and SDF<br>4: Yes, included in IDP, SDF and MTSF |
| | | | | 2.4. Does the proposed project improve the spatial layout of the city/town? | | 20% | 0 | 0 | Scoring:<br>0: No, project is not located within the urban edge and does not promote a compact city<br>4: Yes, project is located within the urban edge and promotes a compact city |
| | | | | 2.5. Are job/work opportunities accessible from the project location? (Office/business park, retail/commercial/industrial facilities/mine etc.) | | 20% | 0 | 0 | Scoring:<br>0: More than 20km<br>1: Within a 10km to 20km radius<br>2: Within a 5km to 10km radius<br>3: Within a 1km to 5km radius<br>4: Walking distance (less than 1km) |

| Criteria | Criteria Weight | Criteria Score (out of 100) | Score (out of weight criteria total) | Criteria | Score Allocated (0 to 4) | Weight Breakdown (Total must equal 100%) | Points (based on score allocated) | Score | Scoring Guidelines |
|---|---|---|---|---|---|---|---|---|---|
| 3. Built Environment Capacity (Environmental & Community Impact Planning) | 10 | 0 | 0 | 1. Critical Regional Mass | 0 | 100% | 0 | 0 | |
| | | | | 3.1. Does the project provide for social amenities and appropriate infrastructure that will be relevant over the long term? | | 30% | 0 | 0 | Scoring:<br>0: No<br>2: Yes, planned for short term relevance (only addresses current capacity)<br>4: Yes, planned for long term relevance (will address future capacity) |
| | | | | 3.2. Is this an environmentally conscious/ considerate project? | | 30% | 0 | 0 | Scoring:<br>0: No environmental process has been followed (no EIA/ environmental authorisation etc.)<br>2: Environment has been taken into consideration during planning phase only<br>4: Environmental has been taken into consideration during planning, design and implementation phases |
| | | | | 3.3. Is there a community engagement strategy in place to integrate the existing communities into the development? | | 40% | 0 | 0 | Scoring:<br>0: No<br>2: Yes, but not fully implemented<br>4: Yes, and fully implemented |
| 4. Supply & Demand (Is the project addressing local needs)? | 25 | 0 | 0 | 4. Supply & Demand | 0 | 100% | 0 | 0 | |
| | | | | 4.1. Does the project address the housing demand (has a market study been conducted to determine the demand)? | | 40% | 0 | 0 | Scoring:<br>0: No market study has been done<br>2: Yes, but the market study is older than 2 years<br>4: Yes, a market study has been done and it is still relevant (no older than 2 years) |
| | | | | 4.2. Does the project cater for a variation of different levels of affordability? | | 40% | 0 | 0 | Scoring:<br>0: Only low income<br>2: Low and medium income<br>4: Low, medium and high income |
| | | | | 4.3. Does the project achieve a mix of tenure options? | | 20% | 0 | 0 | Scoring:<br>0: Only one option (either own or rent)<br>4: Ownership and rental options |

| Criteria | Criteria Weight | Criteria Score (out of 100) | Score (out of weight criteria total) | Criteria | Score Allocated (0 to 4) | Weight Breakdown (Total must equal 100%) | Points (based on score allocated) | Score | Scoring Guidelines |
|---|---|---|---|---|---|---|---|---|---|
| 5. Innovative & Catalytic (Will the project create visible, positive change & impact?) | 35 | 0 | 0 | 5. Innovation & Catalytic | 0 | 100% | 0 | 0 | |
| | | | | 5.1. Has the site been selected with a view to recycling of land, re-appropriation of existing buildings, revitalising an economically distressed area or the innovative siting/location of housing? | | 25% | 0 | 0 | Scoring:<br>0: No<br>4: Yes |
| | | | | 5.2. What is the projects estimated timeframe? | | 25% | 0 | 0 | Scoring:<br>0: Completion after 5 or more years<br>2: Completion within the next 2 to 5 years<br>4: Less that 2 years to completion |
| | | | | 5.3. Will it fill a spatial gap in the city's layout? | | 25% | 0 | 0 | Scoring:<br>0: No<br>2: Yes, to some extent<br>4: Yes |
| | | | | 5.4. Will the project stand out nationally, contribute to national housing objectives or spatial priorities? | | 25% | 0 | 0 | Scoring:<br>0: No<br>4: Yes |
| 6. Economic Activity (Contribution to local socio-eco-nomic growth) | 40 | 0 | 0 | 6. Economic Activity | 0 | 100% | 0 | 0 | |
| | | | | 6.1. How will the local economy benefit in job creation? What is the extent of the job creation? | | 40% | 0 | 0 | Scoring:<br>0: Less than 10,000 job opportunities will be created<br>1: 10,000 to 25,000 job opportunities will be created<br>2: 25,000 to 50,000 job opportunities will be created<br>3: 50,000 to 100,000 job opportunities will be created<br>4: 100,000 job opportunities and more |
| | | | | 6.2. Will the proposed project create a new community that will contribute to the socio-economic growth of the broader area (commercial/retail/industrial sites included in the develop-ment). | | 30% | 0 | 0 | Scoring:<br>0: No, the project includes only residential development<br>2: Yes, the project will include a small number of commercial/retail development<br>4: Yes, the project will include a large number of commercial/retail/industrial development |
| | | | | 6.3. Will the project include private sector investment/ participation? | | 30% | 0 | 0 | Private sector Contribution: Scoring<br>0: None<br>1: Less than 10%<br>2: 10% to 20%<br>3: 20 to 40%<br>4: More than 40% |

Source: Extract of HDA (2016b): 1-2

# ANNEXURE C: MONITORING APPROACH FOR PDAS

| Outcomes | INDICATORS | DEFINITION & METHOD OF MEASUREMENT | BASELINE of INDICATOR | TARGET | DATA SOURCE | FREQUENCY | RESPONSIBLE | REPORTING |
|---|---|---|---|---|---|---|---|---|
| | | How is defined and measured? | What is the current measurement of Indicator? | What is the target measurement of Indicator? | How will it be measured? | How often will it be measured? | Who will measure it? | Where will it be reported? |
| Outcome 1 "Create opportunities for liveable, inclusive and resilient towns and cities" | Set Indicator 1.1 Land | Land ownership | Land ownership % Land developability index | Vacant state land or landed properties 90-100% developable | Calculate the area of vacant land or landed properties [Data Source: DRALR, 2013-14 & 2017-18; GTI-SA, 2018]<br><br>Calculate the % of land developable land [Data Source: HDA, 2018a] | Baseline<br><br>Implementation (Annually)<br><br>Post – implementation | HDA | Quarterly and Annual reports |
| | Set Indicator 1.2 Infrastructure | Current infrastructure in the area:<br>Water<br>Sewerage<br>Electricity<br>Roads | Water and sewer capacities in the area Electricity capacity in the area condition and capacity of the road infrastructure in the area | 100% of households having access to electricity, flush toilets and water in their house<br><br>100% Access to road infrastructure | % of households with access to water, electricity, and sewer in their households [Data Source: Stats SA, 2011] | Baseline<br><br>Implementation (Annually)<br><br>Post – implementation | HDA | Quarterly and Annual reports |
| | Set Indicator 1.2 Climate Change Resilience and the Natural Environment | Innovative technology<br>Water Harvesting tanks<br>Solar panels<br>Land Developability | No. of units with innovative technology Land Developability Index | 100% of new units fitted with innovative technology 90-100% developable | Innovative technology incorporated in new housing projects [Data Source: Development Plans, Urban Design Plans and other project plans]<br><br>Calculate the % of land developable land [Data Source: HDA, 2018a] | Baseline<br><br>Implementation (Annually)<br><br>Post – implementation | HDA | Quarterly and Annual reports |
| | Set Indicator 1.3 Mixed Land Use | Encourage mixed land uses | Structures for different land uses (current)<br>Zoning of the PDA (current)<br>Plans for stands for retail, business, SMMEs, community services and other land uses. | Comparisons of different structures for different land uses<br>Analysis of zoning status of an area.<br>Plans for residential or rezone to residential for housing need.<br>55% Residential, Industrial, and Commercial use (CSIR, 2000) | No of structures for different land uses [Data Source: GTI-SA, 2020]<br>Determine zoning status using municipal. [Data Source: Municipal Zoning Schemes and Maps]<br>No. of stands for Residential, Industrial, and Commercial use [Data Source: Development Plans, Land Use and Urban Design Plans] | Baseline<br><br>Implementation (Annually)<br><br>Post – implementation | HDA | Quarterly and Annual reports |
| | Set Indicator 1.4 Transport Networks | Modes of Public Transport<br>Suburbs serviced by transport stops<br>Adequate NMT Infrastructure | Types of public transport<br>Sufficient transport stops<br>Existence of NMT infrastructure | Different public transport modes in the area (taxi routes, bus routes private transport etc).<br>All suburbs services by public transport<br>Adequate NMT infrastructure | Public Transport in the Area [Data Source: Calculation from AfriGIS, 2021 Data]<br><br>Public transport stops in the area [Data Source: Calculation from AfriGIS, 2021 Data]<br>Suburbs and transport stops [Data Source: Calculation from AfriGIS, 2021 Data] | Quarterly | HDA | Quarterly and Annual reports |

| Outcomes | INDICATORS | DEFINITION & METHOD OF MEASUREMENT | BASELINE of INDICATOR | TARGET | DATA SOURCE | FREQUENCY | RESPONSIBLE | REPORTING |
|---|---|---|---|---|---|---|---|---|
| | | How is defined and measured? | What is the current measurement of Indicator? | What is the target measurement of Indicator? | How will it be measured? | How often will it be measured? | Who will measure it? | Where will it be reported? |
| Outcome 2 "Reverse the unjust and dysfunctional spatial legacy of apartheid" | Set Indicator 2.1 Housing Typologies and Density | Need to design for the appropriate housing need in the area and make sure a variety of options are available.<br><br>Decreased housing need in the PDAs | Typologies<br>Density<br>Housing need database | Different housing typologies (at least 4 housing typologies) and integrated human settlement<br>Increased liveable density over time<br>Decreased housing need | Typologies [Data Source: Development Plans, Urban Design Plans & other project plans]<br>Density [Data Source: GTI-SA, 2018 & PDA Areas]<br>Housing Needs [Data Source: National Housing Needs Register] | Baseline<br><br>Implementation (Annually)<br><br>Post – implementation | HDA | Quarterly and Annual reports |
| | Set Indicator 2.2 Amenities & Services | Prioritise providing amenities with good location and population need. | Amenities and Services (current and planned as well as if it will serve the incoming population) | 100% access to amenities, within allowable walking/access distance and servicing the population. Calculation based on red book provisions (CSIR, 2000; NDHS, 2019b). | Amenities servicing current population [Date Source: Calculation from AfriGIS, 2021 & GTI-SA, 2020 Data] | Baseline<br><br>Implementation (Annually)<br><br>Post – implementation | HDA | Quarterly and Annual reports |
| | Set Indicator 3.1 Property Markets | What is the property profile of the PDA? (types of property, rate of transactions, average transaction value, percentage bonded transactions etc.) | Property transactions analysis | Low-income households participating in the property market | Property market in the area [Data Source: HDA, 2018b] | Quarterly | HDA | Quarterly and Annual reports |
| | Set Indicator 3.2 Socio-Economics | Income Distribution | Current Income Distribution | Increase in overall income | Income distribution of households [Data Source: GTI-SA, 2020 Data]<br>Socio-Economic Surveys | Quarterly | HDA | Quarterly and Annual reports |
| | Set Indicator 3.3 Economic Development and Job Creation | Main economic driver<br>SMMES opportunities including informal trading spaces<br>Land use planning<br>Employment Levels | Land uses for economic opportunities (retail, business, industrial)<br>Informal trading spaces<br>Employment Levels (Formal and Informal)<br>Unemployment Levels | Sufficient land uses for economic opportunities<br>Sufficient space allocations for informal trading spaces<br>Increase in economic opportunities<br>Decrease in unemployment levels | Development Plans<br>Urban Design Plans<br>Socio-Economic Surveys<br>Employment Levels [Data Source: Stats SA, 2011] | Quarterly | HDA | Quarterly and Annual reports |
| Outcome 4 "Increase the asset creation potential of the state's investments in human settlements" | Set Indicator 4.1 Urban Management | Municipal urban management plans<br><br>Building maintenance<br><br>Beneficiary education | Municipal urban management plans<br><br>Building maintenance<br><br>Beneficiary education | Municipal urban management plans incorporated in planning for new projects<br><br>Building maintenance fund<br><br>Beneficiary education | Beneficiary education [Data Source: Project Plans] Urban management [Data<br><br>Source: Urban management plans of the municipality] | Quarterly | HDA | Quarterly and Annual reports |

# ANNEXURE D
# SPATIAL TRANSFORMATION SCORING TOOL BENCHMARKS (A)

## SPATIAL TRANSFORMATION SCORING TOOL BENCHMARKS (A)

| INDICATOR | PROXY | GOOD PROGRESS | MEDIUM PROGRESS | NEEDS SOME WORK | |
|---|---|---|---|---|---|
| **OVERVIEW** | | | | | |
| ENVISIONED HOUSING YIELD (HOUSING NEED) | HOUSING NEED | ≥ 90% CONFIDENCE INDEX | 50 - 90% CONFIDENCE INDEX | ≤ 50% CONFIDENCE INDEX | |
| BREAKDOWN OF HH OPPORTUNITIES (TYPOLOGY) | HOUSING TYPOLOGIES | BNG + FLISP + SH/CRU + OPEN MAR | BNG + FLISP + SH/CRU | [ONE TYPOLOGY] | |
| HH OPP = BENEFICIARIES = TITLE DEEDS (FIN YEAR) | | HH OPP = BENEFICIARIES = TITLE D | HH OPP = BENEFICIARIES | HOUSING OPPORTUNITIES | |
| DENSITY (ANALYSIS) | 50 DU HA URBAN AREAS | > 50 DU/HA | 10-50 DU/HA | < 10 DU/HA | DERIVED: CSIR (2000). |
| **PILLAR 1 : TRANSVERSAL ALIGNMENT (ANALYSIS)** | MTSF + PHDA + PGDS + IDP/SDF | MTSF + PHDA + PGDS + IDP/SDF | MTSF + PGDS + IDP/SDF | [ONE FRAMEWORK] | |
| | | | | | |
| **PILLAR 2 AND PILLAR 3: LAND VALUE-ADD / INTEGRATION** | | | | | |
| DEVELOPABLE LAND | % OF DEVELOPABLE LAND | 100% DEVELOPABLE | 50-99% DEVELOPABLE | < 50 % DEVELOPABLE | |
| ***EDUCATIONAL AMENITIES*** | | | | | |
| NURSERY/CRECHE | 750M WD OR 1 PER 5000 | ≤ 750M WD OR 1 PER 5000 | 751M-1500M WD OR 1 PER 5001-10000 | ≥ 1500M WD OR 1 PER > 10000 | DERIVED: CSIR (2000). |
| PRIMARY SCHOOL | 1.5KM WD OR 1 PER 3-4000 | ≤ 1.5KM WD OR 1 PER 3-4000 | 1.501KM-3KM WD OR 1 PER 4001-8000 | > 3KM WD OR 1 PER > 8000 | DERIVED: CSIR (2000). |
| SECONDARY SCHOOL | 2.25KM WD OR 1 PER 6-10 000 | ≤ 2.25KM WD OR 1 PER 6-10000 | 2.25-4.5KM WD OR 1 PER 10 001-20000 | > 4.5KM WD OR 1 PER > 20000 | DERIVED: CSIR (2000). |
| TERTIARY FACILITY | [DEPENDS ON REGIONAL SCALE] | 1 PER TOWN | 1 PER MUNICIPALITY | 1 PER PROVINCE | |
| ***HEALTH AMENITIES*** | | | | | |
| MOBILE CLINIC | 1KM WD OR 1 PER 5000 | ≤ 1KM OR 1 PER 5000 | 1.001-2KM WD OR 1 PER 5001-10000 | > 2KM WD OR 1 PER > 10 000 | DERIVED: CSIR (2000). |
| CLINIC | 2KM WD OR 1 PER 5000 | ≤ 2KM WD OR 1 PER 5000 | 2.001-4KM WD OR 1 PER 5001-10000 | > 4KM WD OR 1 PER > 10 000 | DERIVED: CSIR (2000). |
| HOSPITALS | [DEPENDS ON REGIONAL SCALE] | 1 PER TOWN | 1 PER MUNICIPALITY | 1 PER PROVINCE | |
| ***RECREATIONAL AMENITIES*** | | | | | |
| LARGER PARKS | 500M WD | ≤ 500M WD | 501M - 1000M WD | > 1000M WD | DERIVED: CSIR (2000). |
| SMALLER PARKS | 300M WD | ≤ 300M WD | 301M - 600M WD | > 600M WD | DERIVED: CSIR (2000). |
| SPORTS FIELDS | 300M WD | ≤ 300M WD | 301M - 600M WD | > 600M WD | DERIVED: CSIR (2000). |
| ***CULTURAL AMENITIES*** | | | | | |
| LIBRARY | 1.5KM-2.25KM WD OR 1 PER 5-50 000 | ≤ 2.25KM OR 1 PER 50000 | 2.25-4.5KM WD OR 1 PER 50001-100 000 | > 4.5KM OR 1 PER > 100000 | DERIVED: CSIR (2000). |
| COMMUNITY CENTRES | 1.5KM-2.25KM WD OR 1 PER 10000 | ≤ 2.25KM OR 1 PER 10000 | 2.25-4.5KM WD OR 1 PER 10001-20000 | > 4.5KM OR 1 PER > 20000 | DERIVED: CSIR (2000). |
| RELIGIOUS CENTRES | 1.5KM WD OR 1 PER 2000 | ≤ 1.5KM OR 1 PER 2000 | 1.5-3KM WD OR 1 PER 2001-4000 | > 3KM OR 1 PER > 4000 | DERIVED: CSIR (2000). |
| ***ADMINISTRATIVE AMENITIES*** | | | | | |
| MUNICIPAL OFFICES/PAY POINTS | 30 MIN TRAVEL TIME OR 1 PER 50000 | 30 MIN TRAVEL TIME OR 1 PER 50000 | 31-60MIN TT OR 1 PER 50001-100000 | > 60MIN TT OR 1 PER > 100000 | DERIVED: CSIR (2000). |
| POST OFFICE | 2KM WD OR 1 PER 11000 | ≤ 2KM OR 1 PER 11000 | 2-4KM WD OR 1 PER 11001-22000 | > 4KM OR 1 PER >22000 | DERIVED: CSIR (2000). |
| POLICE STATION | 1.5KM WD OR 1 PER 25000 | ≤ 1.5KM WD OR 1 PER 25000 | 1.501KM-3KM WD OR 1 PER 25001-50000 | > 3KM WD OR 1 PER > 50000 | DERIVED: CSIR (2000). |
| FIRE STATION | 1 PER 60000 | 1 PER 60000 | 1 PER 60001 - 120000 | 1 PER > 120000 | DERIVED: CSIR (2000). |
| CHILDREN'S HOME | 1 PER 200000 | 1 PER 200000 | 1 PER 200001 - 400000 | 1 PER > 400000 | DERIVED: CSIR (2000). |
| COMMUNITY INFO CENTRES | 1KM WD OR 1 PER 22000 | ≤ 1KM OR 1 PER 22000 | 1.001-2KM WD OR 1 PER 22001 - 44000 | > 2KM WD | DERIVED: CSIR (2000). |
| SHOPPING POINTS | 1KM WD | ≤ 1KM WD | 1.001 - 2KM WD | > 2KM WD | |

CONCEPTUALIZED BY THE MONITORING & EVALUATION, KNOWLEDGE MANAGEMENT AND RESEARCH PLANNING TEAM
DATE: 28TH FEB 2019
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## SPATIAL TRANSFORMATION SCORING TOOL BENCHMARKS (A)

| INDICATOR | PROXY | GOOD PROGRESS | MEDIUM PROGRESS | NEEDS SOME WORK | |
|---|---|---|---|---|---|
| WATER AND SEWER | MIN 25L PERSON/DAY OR 6KL HH/MNTH | ≥ 25l PERSON/DAY OR ≥ 6kl HH/MNTH | N/A | <25l PERSON/DAY OR <6kl HH/MNTH | DERIVED: CSIR (2000) |
| ELECTRICITY | AVERAGE 230-340KWH PER MONTH | > 230–340 KWH HH PER MONTH | N/A | < 230–340 KWH HH PER MONTH | DERIVED: Cape Water Solutions |
| ROAD INFRASTRUCTURE | CLASS 1 - CLASS 6 | | | | DERIVED: COJ. (n.d). |
| ICT INFRASTRUCTURE | KM OF BROADBAND/FIBRE-OPTIC | | | | |
| ***LAND TO CATALYSE PRIVATE SECTOR*** | | | | | |
| NO OF STANDS FOR INSTITUTIONAL USE | REGIONAL SCALE | 1 PER TOWN | 1 PER MUNICIPALITY | 1 PER PROVINCE | |
| NO OF STANDS FOR RES, IND AND COM USE | 55% RES, COM AND IND USES | RES + COM + IND USES | [ANY TWO] | RESIDENTIAL ONLY | DERIVED: CSIR (2000) |
| ***TRANSPORT*** | | | | | |
| PUBLIC MODES OF TRANSPORT | BUS + TAXI + BRT + TRAIN + CAB | [THREE MODES] | [TWO MODES] | [ONE MODE] | |
| TRANSPORT NODES | PER AREA | 1 PER SUBURB | 1 PER 2-5 SUBURBS | 1 PER > 5 SUBURBS | |
| NMT [WALKWAYS/CYCLE LANES] | WALKING DISTANCE - TRANS NODE | ≤ 2.5KM WD | 2.5-5KM WD | >5KM WD | |
| | | | | | |
| **PILLAR 4: HUMAN SETTLEMENTS TRANSFORMATION SCORECARD** | | | | | |
| ***DEVELOPER BEE*** | | | | | |
| BEE COMPLIANT | BEE LEVELS | LEVEL 1 - 4 | LEVEL 5 - 8 | LEVEL 9 | DERIVED: HDA. (2017d). |
| % BLACK OWNERSHIP | PERCENTAGE | > 65% | 45-65% | < 44% | DERIVED: HDA. (2017d). |
| % YOUTH OWNERSHIP | PERCENTAGE | > 50% | 30-50% | < 29% | |
| % WOMEN OWNERSHIP | PERCENTAGE | > 50% | 30-50% | < 29% | DERIVED: HDA. (2017d). |
| % DISABLED OWNERSHIP | PERCENTAGE | > 29% | 5-29% | < 4% | |
| % MILITARY VETS OWNERSHIP | PERCENTAGE | > 29% | 5-29% | < 4% | DERIVED: HDA. (2017d). |
| ***SUPPLIER TRANSFORMATION (SERVICE SUPPLIER)*** | | | | | |
| BEE COMPLIANT | BEE LEVELS | LEVEL 1 - 4 | LEVEL 5 - 8 | LEVEL 9 | DERIVED: HDA. (2017d). |
| % BLACK OWNERSHIP | PERCENTAGE | > 65% | 45-65% | < 44% | DERIVED: HDA. (2017d). |
| % WOMEN OWNERSHIP | PERCENTAGE | > 50% | 30-50% | < 29% | DERIVED: HDA. (2017d). |
| % SUPPLIERS WITHIN THE COMMUNITY | PERCENTAGE | > 79% | 25-79% | < 24% | DERIVED: HDA. (2017d). |
| ***SUPPLIER TRANSFORMATION (PRODUCT SUPPLIER)*** | | | | | |
| BEE COMPLIANT | BEE LEVELS | LEVEL 1 - 4 | LEVEL 5 - 8 | LEVEL 9 | DERIVED: HDA. (2017d). |
| % BLACK OWNERSHIP | PERCENTAGE | > 65% | 45-65% | < 44% | DERIVED: HDA. (2017d). |
| % WOMEN OWNERSHIP | PERCENTAGE | > 50% | 30-50% | < 29% | DERIVED: HDA. (2017d). |
| ***CONTRACTORS TRANSFORMATION*** | | | | | |
| % JOBS FOR THE LOCAL COMMUNITY | PERCENTAGE | > 89% | 80-89% | < 79% | DERIVED: HDA. (2017d). |
| BEE COMPLIANT | BEE LEVELS | LEVEL 1 - 4 | LEVEL 5 - 8 | LEVEL 9 | DERIVED: HDA. (2017d). |
| % BLACK OWNERSHIP | PERCENTAGE | > 65% | 45-65% | < 44% | DERIVED: HDA. (2017d). |
| % WOMEN OWNERSHIP | PERCENTAGE | > 50% | 30-50% | < 29% | DERIVED: HDA. (2017d). |

CONCEPTUALIZED BY THE MONITORING & EVALUATION, KNOWLEDGE MANAGEMENT AND RESEARCH PLANNING TEAM
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QUERIES: raeesa.ghoor@thehda.co.za

## SPATIAL TRANSFORMATION PLANNING TOOL BENCHMARKS (B)

| INDICATOR | PROXY | GOOD PROGRESS | MEDIUM PROGRESS | NEEDS SOME WORK | |
|---|---|---|---|---|---|
| **OVERVIEW** | | | | | |
| ENVISIONED HOUSING YIELD (HOUSING NEED) | HOUSING NEED | ≥ 90% CONFIDENCE INDEX | 50 - 90% CONFIDENCE INDEX | ≤ 50% CONFIDENCE INDEX | |
| BREAKDOWN OF HH OPPORTUNITIES (TYPOLOGY) | BNG + FLISP + SH + CRU + OM + SA etc | [AT LEAST 5 TYPOLOGIES] | [AT LEAST 3 TYPOLOGIES] | [1-2 TYPOLOGIES] | |
| HH OPP = BENEFICIARIES = TITLE DEEDS (FIN YEAR) | | HH OPP = BENEFICIARIES = TITLE D | HH OPP = BENENFICIARIES | HOUSING OPPORTUNITIES | |
| DENSITY (ANALYSIS) | 50 DU HA URBAN AREAS | > 50 DU/HA | 10-50 DU/HA | < 10 DU/HA | DERIVED: CSIR (2000). |
| **PILLAR 1 : TRANSVERSAL ALIGNMENT (ANALYSIS)** | MTSF + PHDA + PGDS + IDP/SDF | MTSF + PHDA + PGDS + IDP/SDF | MTSF + PGDS + IDP/SDF | [ONE FRAMEWORK] | |
| **PILLAR 2 AND PILLAR 3: LAND VALUE-ADD / INTEGRATION** | | | | | |
| DEVELOPABLE LAND | % OF DEVELOPABLE LAND | 90-100% DEVELOPABLE | 50-89% DEVELOPABLE | < 50 % DEVELOPABLE | |
| SHOPPING POINTS | 1KM WD | ≤ 1KM WD | 1.001 - 2KM WD | > 2KM WD | |
| ***EDUCATIONAL SERVICES*** | | | | | |
| EARLY CHILDHOOD DEVELOPMENT CENTRES | 2-5km AD OR 1 PER 2400-3500 | ≤ 5km AD OR 1 PER 2400-3500 | 5.001-10KM AD OR 1 PER 3501-7000 | > 10km AD OR 1 PER > 7000 | DERIVED: NDHS. (2019b). |
| EARLY CHILDHOOD DEVELOPMENT RESOURCE CENTRE/HUB* | 5KM AD OR 1 PER 20000 | ≤ 5KM AD OR 1 PER 20000 | 5.001-10KM AD OR 1 PER 20000-40000 | > 10KM AD OR 1 PER > 40000 | DERIVED: NDHS. (2019b). |
| PRIMARY SCHOOL | 5KM AD OR 1 PER 2200-6600 | ≤ 5KM AD OR 1 PER 2200-6600 | 5.001-10KM AD OR 1 PER 6601-13200 | > 10KM WD OR 1 PER > 13200 | DERIVED: NDHS. (2019b). |
| SECONDARY SCHOOL | 5KM AD OR 1 PER 4000-10000 | ≤ 5KM AD OR 1 PER 4-10000 | 5.001-10KM AD OR 1 PER 10001-20000 | > 10KM AD OR 1 PER > 20000 | DERIVED: NDHS. (2019b). |
| TERTIARY FACILITY | | 3km COMMUTING DISTANCE | 3-50km COMMUTING DISTANCE | > 50KM COMMUTING DISTANCE | |
| ***HEALTH SERVICES*** | | | | | |
| PRIMARY HEALTH CARE CLINICS | CLINIC 5-10KM AD OR 1 PER 5000-60000 | ≤ 10KM AD OR 1 PER 5000-60000 | 10.001-20KM AD OR 1 PER 60001-120000 | > 20KM AD OR 1 PER > 120000 | DERIVED: NDHS. (2019b). |
| COMMUNITY HEALTH CENTRES (CHCs) | HOSPITALS 10KM AD OR 1 PER 60000-150000 | ≤ 10KM AD OR 1 PER 60000-150000 | 10.001-20KM AD OR 1 PER 150001-300000 | > 20KM AD OR 1 PER > 300000 | DERIVED: NDHS. (2019b). |
| ***COMMUNITY SERVICES*** | | | | | |
| LIBRARIES (BASIC) | 5KM AD OR 1 PER 5000-25000 | ≤ 5KM AD OR 1 PER 5000-25000 | 5.001-10KM AD OR 1 PER 25001-50000 | > 10KM AD OR 1 PER > 50000 | DERIVED: NDHS. (2019b). |
| LIBRARIES (BRANCH)* | 10KM AD OR 1 PER 50000-150000 | ≤ 10KM AD OR 1 PER 50000-150000 | 10.001-20KM AD OR 1PER 150001-300000 | > 20KM AD OR 1 PER > 300000 | DERIVED: NDHS. (2019b). |
| COMMUNITY HALLS | COMMUNITY CENTRES 8-10KM AD OR 1 PER 5000-60000 | ≤ 10KM AD OR 1 PER 5000-60000 | 10.001-20KM AD OR 1PER 60001-120000 | > 20KM AD OR 1 PER > 120000 | DERIVED: NDHS. (2019b). |
| ***CIVIC SERVICES*** | | | | | |
| MULTI-PURPOSE CENTRES* | 15KM AD OR 1 PER 20000-200000 | ≤ 15KM AD OR 1 PER 20000-200000 | 15.001-30KM AD OR 1 PER 200001-400000 | > 30KM AD OR 1 PER > 400000 | DERIVED: NDHS. (2019b). |
| DEPARTMENT OF HOME AFFAIRS & DEPARTMENT OF LABOUR | 15KM AD OR 1 PER 20000-200000 | ≤ 15KM AD OR 1 PER 20000-200000 | 15.001-30KM AD OR 1 PER 200001-400000 | > 30KM AD OR 1 PER > 400000 | DERIVED: NDHS. (2019b). |
| DEPARTMENT OF SOCIAL DEVELOPMENT | 15KM AD OR 1 PER 5000-40000 | ≤ 15KM AD OR 1 PER 5000-40000 | 15.001-30KM AD OR 1 PER 40000-80000 | > 30KM AD OR 1 PER > 80000 | DERIVED: NDHS. (2019b). |
| SASSA | 15KM AD OR 1 PER 30000-120000 | ≤ 15KM AD OR 1 PER 30000-120000 | 15.001-30KM AD OR 1 PER 120000-240000 | > 30KM AD OR 1 PER > 240000 | DERIVED: NDHS. (2019b). |
| SOCIAL GRANT PAY POINTS* | 5KM AD OR 1 PER ≥ 200 grant recipients | ≤ 5KM AD OR 1 PER 200 grant recep | 5.001-10KM AD OR 1 PER 200-400 grant rec | > 10KM AD OR 1 PER > 200 grant recep | DERIVED: NDHS. (2019b). |
| ***SECURITY AND EMERGENCY SERVICES*** | | | | | |
| POLICE STATION | 8KM AD OR 1 PER 10000-60000 | ≤ 8KM AD OR 1 PER 10000-60000 | 8.001KM-16KM AD OR 1 PER 60001-120000 | > 16KM AD OR 1 PER > 120000 | DERIVED: NDHS. (2019b). |
| FIRE STATION | 8KM AD (MINS) HIGH RISK & CBD | ≤ 8KM AD | 8.001KM-16KM AD | > 16KM AD | DERIVED: NDHS. (2019b). |
| | 13KM AD (MINS) SUBURBAN BRICK | ≤ 13KM AD | 13.001KM-26KM AD | > 26KM AD | DERIVED: NDHS. (2019b). |
| ***SOCIAL SERVICES*** | | | | | |
| HOME FOR THE AGED & CHILD & YOUTH CARE CENTRES | 25KM AD OR 1 PER 20000-60000 | ≤ 25KM AD OR 1 PER 20000-60000 | 25.001KM-50KM AD OR 1 PER 60001-120000 | > 50KM AD OR 1 PER > 120000 | DERIVED: NDHS. (2019b). |
| ***COMMUNICATION SERVICES*** | | | | | |
| POST OFFICES/ POSTAL AGENCIES/ POST BOXES | 5-10KM AD OR 1 PER 10000-20000 | ≤ 10KM AD OR 1 PER 10000-20000 | 10.001-20KM AD OR 1 PER 20001-40000 | > 20KM AD OR 1 PER > 40000 | DERIVED: NDHS. (2019b). |
| ICT ACCESS HUBS/ INFORMATION CENTRES* | 5KM AD OR 1 PER 5000 | ≤ 5KM AD OR 1 PER 5000 | 5.001 - 10KM AD OR 1 per 5000-10000 | > 10KM AD OR 1 PER > 10000 | DERIVED: NDHS. (2019b). |

## SPATIAL TRANSFORMATION PLANNING TOOL BENCHMARKS (B)

| INDICATOR | PROXY | GOOD PROGRESS | MEDIUM PROGRESS | NEEDS SOME WORK | |
|---|---|---|---|---|---|
| WATER AND SEWER | MIN 25L PERSON/DAY OR 6KL HH/MNTH | ≥ 25l PERSON/DAY OR ≥ 6kl HH/MNTH | N/A | <25l PERSON/DAY OR <6kl HH/MNTH | DERIVED: DWAF. (n.d) |
| ELECTRICITY | AVERAGE 230-340KWH PER MONTH | > 230–340 KWH HH PER MONTH | N/A | < 230–340 KWH HH PER MONTH | DERIVED: CAPE WATER S |
| ROAD INFRASTRUCTURE | CLASS 1 - CLASS 6 | | | | DERIVED: COJ. (n.d). |
| ICT INFRASTRUCTURE | KM OF BROADBAND/FIBRE-OPTIC | | | | |
| ***LAND TO CATALYSE PRIVATE SECTOR*** | | | | | |
| NO OF STANDS FOR INSTITUTIONAL USE | REGIONAL SCALE | 1 PER TOWN | 1 PER MUNICIPALITY | 1 PER PROVINCE | |
| NO OF STANDS FOR RES, IND AND COM USE | 55% RES, COM AND IND USES | RES + COM + IND USES | [ANY TWO] | RESIDENTIAL ONLY | DERIVED: CSIR (2000). |
| ***TRANSPORT*** | | | | | |
| PUBLIC MODES OF TRANSPORT | BUS + TAXI + BRT + TRAIN + CAB | [THREE MODES] | [TWO MODES] | [ONE MODE] | |
| TRANSPORT NODES | PER AREA | 1 PER SUBURB | 1 PER 2-5 SUBURBS | 1 PER > 5 SUBURBS | |
| NMT [WALKWAYS/CYCLE LANES] | WALKING DISTANCE - TRANS NODE | ≤ 2.5KM WD | 2.5-5KM WD | >5KM WD | |
| | | | | | |
| **PILLAR 4: HUMAN SETTLEMENTS TRANSFORMATION SCORECARD** | | | | | |
| ***DEVELOPER BEE*** | | | | | |
| BEE COMPLIANT | BEE LEVELS | LEVEL 1 - 4 | LEVEL 5 - 8 | LEVEL 9 | DERIVED: HDA. (2017d). |
| % BLACK OWNERSHIP | PERCENTAGE | > 65% | 45-65% | < 44% | DERIVED: HDA. (2017d). |
| % YOUTH OWNERSHIP | PERCENTAGE | > 50% | 30-50% | < 29% | |
| % WOMEN OWNERSHIP | PERCENTAGE | > 50% | 30-50% | < 29% | DERIVED: HDA. (2017d). |
| % DISABLED OWNERSHIP | PERCENTAGE | > 29% | 5-29% | < 4% | |
| % MILITARY VETS OWNERSHIP | PERCENTAGE | > 29% | 5-29% | < 4% | DERIVED: HDA. (2017d). |
| ***SUPPLIER TRANSFORMATION (SERVICE SUPPLIER)*** | | | | | |
| BEE COMPLIANT | BEE LEVELS | LEVEL 1 - 4 | LEVEL 5 - 8 | LEVEL 9 | DERIVED: HDA. (2017d). |
| % BLACK OWNERSHIP | PERCENTAGE | > 65% | 45-65% | < 44% | DERIVED: HDA. (2017d). |
| % WOMEN OWNERSHIP | PERCENTAGE | > 50% | 30-50% | < 29% | DERIVED: HDA. (2017d). |
| % SUPPLIERS WITHIN THE COMMUNITY | PERCENTAGE | > 79% | 25-79% | < 24% | DERIVED: HDA. (2017d). |
| ***SUPPLIER TRANSFORMATION (PRODUCT SUPPLIER)*** | | | | | |
| BEE COMPLIANT | BEE LEVELS | LEVEL 1 - 4 | LEVEL 5 - 8 | LEVEL 9 | DERIVED: HDA. (2017d). |
| % BLACK OWNERSHIP | PERCENTAGE | > 65% | 45-65% | < 44% | DERIVED: HDA. (2017d). |
| % WOMEN OWNERSHIP | PERCENTAGE | > 50% | 30-50% | < 29% | DERIVED: HDA. (2017d). |
| ***CONTRACTORS TRANSFORMATION*** | | | | | |
| % JOBS FOR THE LOCAL COMMUNITY | PERCENTAGE | > 89% | 80-89% | < 79% | DERIVED: HDA. (2017d). |
| BEE COMPLIANT | BEE LEVELS | LEVEL 1 - 4 | LEVEL 5 - 8 | LEVEL 9 | DERIVED: HDA. (2017d). |
| % BLACK OWNERSHIP | PERCENTAGE | > 65% | 45-65% | < 44% | DERIVED: HDA. (2017d). |
| % WOMEN OWNERSHIP | PERCENTAGE | > 50% | 30-50% | < 29% | DERIVED: HDA. (2017d). |

CONCEPTUALIZED BY THE MONITORING & EVALUATION, KNOWLEDGE MANAGEMENT AND RESEARCH PLANNING TEAM
DATE: 2ND JUNE 2020
QUERIES: raeesa.ghoor@thehda.co.za

# Annexure E: Spatial Investment Framework for Human Settlements (SIFHS) criteria for prioritising projects

| CRITERIA | | | |
|---|---|---|---|
| IMPACT | | | |
| SUPPLY AND DEMAND | BUILT ENVIRONMENT CAPACITY | DEMOGRAPHIC/ DEPRIVATION PROFILE | ECONOMIC ACTIVITY |
| deliver the numbers to address housing demand | environmentally sensitive development | achieve mix in population profile (age, income) | achieve viable communities |
| achieve variation to cater for different levels of affordability | environmental impact assessments | achieve inclusionary neighbourhoods | achieve sustainable livelihoods and increase LED through links with housing delivery processes |
| achieve a mix of housing options and types | appropriate infrastructure - build in redundancy | variation in socio-cultural amenities to cater for different population groups | increase LED through links with local systems of food production |
| achieve a mix of tenure options | long term relevance - build in capacity for change | sell-able identity - achieve sense of ownership and pride | mixed use neighbourhoods |
| density targets | social amenities - for a range of income levels | achieve mix in deprivation profiles across all neighbourhoods | flexible zoning, licencing and approvals |
| pedestrian-focused developments | | 10x10 - proximity to ten places to see and 10 places to visit | |
| INTEGRATE | | | |
| SITE SELECTION INNOVATION | AREA-BASED PLANNING | REGIONAL CRITICAL MASS | PROJECT-LEVEL INNOVATION |
| assess spatial planning mechanisms | context-specific solutions | achieve desired scale of impact | innovative material use and efficiency in construction systems |
| assess project readiness - land audits and technical verification | developed mechanisms for collective and individual decision-making | optimise land development viz fiscal, institutional and admin means | flexible internal planning |
| assess geo-technical capacity | build in capacity for flexible decision making systems | empowerment - social revenue as return on investment | passive energy systems |
| achieve alignment of plans at national, regional, local levels | ensure cross-sectoral initiatives and collaborative funding | mass customisation - address the need for numbers while allowing for variation in individual need | no differentiation between housing products for different income levels |
| assess accessibility levels | achieve socio-political buy-in | stimulate effective and equitable functioning of land markets | differentiation in product design to allow for multiple users and adaptability |
| meet desired norms/ standards at planning and architectural scale | | Improved access to use of land | built-in physical capacity for change and ease of maintenance over time |
| compact city | | | |

Source: Extract from HDA, (2016c): 9

# INFOGRAPHICS SUMMARY

The following infographics have been completed for the HDA. The highlighted infographics are the ones available in the publication. Should additional information be required about this work, please contact raeesa.ghoor@thehda.co.za or karishma.busgeeth@thehda.co.za

| Spatial Transformation Infographics Completed | | |
|---|---|---|
| **Province** | **Catalytic Project/PDA** | |
| Eastern Cape | Zanemvula CP - Chatty Sub-Project | Analysed with Benchmarks A |
| Eastern Cape | Zanemvula CP - Joe Slovo West Sub-Project | Analysed with Benchmarks A |
| Western Cape | Belhar CBD CP | Analysed with Benchmarks A |
| Western Cape | Forest Village CP | Analysed with Benchmarks A |
| Western Cape | Glenhaven CP | Analysed with Benchmarks A |
| Western Cape | Macassar CP | Analysed with Benchmarks A |
| Western Cape | Thembalethu CP | Analysed with Benchmarks A |
| North-West | Bokamoso CP | Analysed with Benchmarks B |
| Gauteng | Leeupoort Rem CP | Analysed with Benchmarks B |
| Gauteng | John Dube Village CP | Analysed with Benchmarks B |
| Gauteng | Malibongwe Ridge CP | Analysed with Benchmarks B |
| Gauteng | Luhfereng CP | Analysed with Benchmarks B |
| Gauteng | Olivenhoutbosch Ext 60 CP | Analysed with Benchmarks B |
| Gauteng | Syferfontein CP | Analysed with Benchmarks B |
| Gauteng | Kirkney Andeon CP | Analysed with Benchmarks B |
| Gauteng | Lion Park Ext 2 CP | Analysed with Benchmarks B |
| Gauteng | Esselen Park CP | Analysed with Benchmarks B |
| Western Cape | Vredenburg CP | Analysed with Benchmarks B |
| Free State | Bakenpark 6 & 7 CP | Analysed with Benchmarks B |
| Free State | Bakenpark 6 & 7 Risks and Mitigations | Not Applicable |
| Free State | Airport Node & Estoire CP | Analysed with Benchmarks B |
| Free State | Airport Node & Estoire Risks and Mitigations | Not Applicable |
| Free State | Sasolburg Properties CP | Analysed with Benchmarks B |
| Northern Cape | Postmasburg CP | Analysed with Benchmarks B |
| Northern Cape | Lerato Park CP | Analysed with Benchmarks B |
| Northern Cape | Lerato Park Risks and Mitigations | Not Applicable |
| Gauteng | Johannesburg South PDA | Analysed with Benchmarks B & New Methodology |
| Gauteng | Greater Alexandra PDA | Analysed with Benchmarks B |
| Mpumalanga | Emahlehni Expansion PDA | Analysed with Benchmarks B |
| Eastern Cape | Port St Johns PDA | Analysed with Benchmarks B |
| Mpumalanga | White River Development Area PDA | Analysed with Benchmarks B |
| Northern Cape | Kimberly PDA | Analysed with Benchmarks B |
| Limpopo | Polokwane CBD PDA | Analysed with Benchmarks B |

# SPATIAL TRANSFORMATION PLANNING TOOL

FREE STATE: BAKENPARK 6&7

**LIFE CYCLE STAGE: DESIGN**

**HDA ROLE: IMPLEMENTING AGENT**

TRACKING INDICATORS

ANALYSED WITH BENCHMARKS B

## OVERVIEW

SUMMARY 3 | 0 | 1 | 1

1 454 ENVISIONED HOUSING YIELD
0 HOUSES BUILT TO DATE
95% DEVELOPABLE LAND [INCLUDES BAKENPARK X5 & CITY]
- UNITS/HA
0 HOUSING OPPORTUNITIES (FIN YEAR)
0 BENEFICIARIES (FIN YEAR)

- ○ ENVISIONED HOUSING YIELD (HOUSING NEED)
- ● BREAKDOWN OF HH OPPORTUNITIES (TYPOLOGY)
- ○ HH OPP = BENEFICIARIES = TITLE DEEDS (FIN YEAR)
- ○ DENSITY (ANALYSIS)
- ● TRANSVERSAL ALIGNMENT (ANALYSIS)

## QUALITY

SUMMARY 4 | 0 | 0 | 0

- ○ INNOVATIVE TECHNOLOGIES
- ○ INNOVATIVE TECHNOLOGIES (UNITS)
- ○ SOLAR PANELS
- ○ WATER HARVESTING TANKS

## SOCIO-ECONOMIC DEVELOPMENT

SUMMARY 7 | 0 | 0 | 4

- ● SOCIO-ECONOMIC SURVEYS
- ● STANDS FOR BONDED AND FLISP HOUSING
- ● STANDS FOR COMMERCIAL AND RENTAL
- ○ STANDS FOR MIXED LAND USE
- ● STANDS FOR BUSINESS DEVELOPMENTS
- ○ SMME (PROJECTS)
- ○ SMME (PLANNED)
- ○ LED AND PUBLIC TRANSPORT
- ○ ADDITIONAL JOBS CREATED
- ○ INFORMAL TRADE ON WALKWAYS
- ○ FOOD SECURITY

## LAND VALUE-ADD [EXISTING]

SUMMARY 9 | 9 | 0 | 11

EDUCATIONAL AMENITIES
- ● EARLY CHILDHOOD DEVELOPMENT CENTRES
- ● PRIMARY SCHOOL
- ● SECONDARY SCHOOL
- ● TERTIARY FACILITY

HEALTH AMENITIES
- ● PRIMARY HEALTH CARE CLINICS [CLINICS]
- ● COMMUNITY HEALTH CENTRES [HOSPITALS]

CULTURAL AMENITIES
- ● LIBRARIES
- ● COMMUNITY HALLS [COMMUNITY CENTRES]

CIVIC SERVICES
- ● DEPARTMENT OF HOME AFFAIRS
- ● DEPARTMENT OF LABOUR
- ● DEPARTMENT OF SOCIAL DEVELOPMENT
- ○ SASSA
- ● SOCIAL GRANT PAY POINTS
- ○ MULTI-PURPOSE CENTRES

SECURITY AND EMERGENCY SERVICES
- ● POLICE STATION
- ● FIRE STATION [HIGH RISK AND CBD]
- ● FIRE STATION [SUBURBAN BRICK]

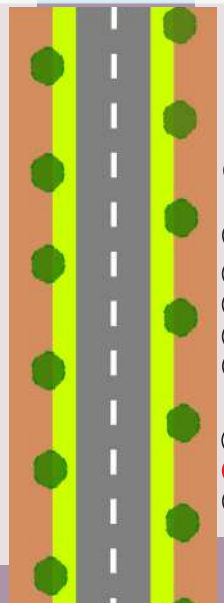
SOCIAL SERVICES
- ● HOME FOR THE AGED
- ● CHILD AND YOUTH CARE FACILITIES

COMMUNICATION SERVICES
- ● POST OFFICES/ POSTAL AGENCIES/ PO BOXES
- ○ ICT ACCESS HUBS/ INFORMATION CENTRES

ECONOMIC AMENITIES
- ● SHOPPING POINTS
- ○ WATER AND SEWER
- ○ ELECTRICITY
- ○ ROAD INFRASTRUCTURE
- ○ ICT INFRASTRUCTURE

LAND TO CATALYSE PRIVATE SECTOR
- ○ NO OF STANDS FOR INSTITUTIONAL USE
- ○ NO OF STANDS FOR RES, IND AND COM USE

● DEVELOPABLE LAND
[LAND VALUE ADD ANALYSIS INCLUDES BAKENPARK X5 & CITY]



## INTEGRATION [PLANNED]

SUMMARY 13 | 9 | 0 | 7

EDUCATIONAL AMENITIES
- ● EARLY CHILDHOOD DEVELOPMENT CENTRES
- ● PRIMARY SCHOOL
- ● SECONDARY SCHOOL
- ● TERTIARY FACILITY

HEALTH AMENITIES
- ● PRIMARY HEALTH CARE CLINICS
- ● COMMUNITY HEALTH CENTRES

CULTURAL AMENITIES
- ● LIBRARY
- ● COMMUNITY HALLS [COMMUNITY CENTRES]

CIVIC SERVICES
- ● DEPARTMENT OF HOME AFFAIRS
- ● DEPARTMENT OF LABOUR
- ● DEPARTMENT OF SOCIAL DEVELOPMENT
- ○ SASSA
- ○ SOCIAL GRANT PAY POINTS
- ○ MULTI-PURPOSE CENTRES

SECURITY AND EMERGENCY SERVICES
- ● POLICE STATION
- ○ FIRE STATION [HIGH RISK AND CBD]
- ○ FIRE STATION [SUBURBAN BRICK]

SOCIAL SERVICES
- ● HOME FOR THE AGED
- ● CHILD AND YOUTH CARE FACILITIES

COMMUNICATION SERVICES
- ● POST OFFICES/ POSTAL AGENCIES/ PO BOXES
- ○ ICT ACCESS HUBS/ INFORMATION CENTRES

ECONOMIC AMENITIES
- ○ SHOPPING POINTS
- ○ WATER AND SEWER
- ○ ELECTRICITY
- ○ ROAD INFRASTRUCTURE
- ○ ICT INFRASTRUCTURE

TRANSPORT
- ○ TRANSPORT NODES
- ● PUBLIC MODES OF TRANSPORT
- ○ NMT [WALKWAYS/CYCLE LANES]

## HS TRANSFORMATION SCORECARD

SUMMARY 17 | 0 | 0 | 0

DEVELOPER BEE
- ○ BEE COMPLIANT
- ○ % BLACK OWNERSHIP
- ○ % YOUTH OWNERSHIP
- ○ % WOMEN OWNERSHIP
- ○ % DISABLED OWNERSHIP
- ○ % MILITARY VETS OWNERSHIP

SUPPLIER TRANSFORMATION (SERVICE SUPPLIER)
- ○ BEE COMPLIANT
- ○ % BLACK OWNERSHIP
- ○ % WOMEN OWNERSHIP
- ○ % SUPPLIERS WITHIN THE COMMUNITY

SUPPLIER TRANSFORMATION (PRODUCT SUPPLIER)
- ○ BEE COMPLIANT
- ○ % BLACK OWNERSHIP
- ○ % WOMEN OWNERSHIP

CONTRACTORS TRANSFORMATION
- ○ % JOBS FOR THE LOCAL COMMUNITY
- ○ BEE COMPLIANT
- ○ % BLACK OWNERSHIP
- ○ % WOMEN OWNERSHIP

## URBAN MANAGEMENT

SUMMARY 8 | 1 | 0 | 0

- ○ PLANS FOR URBAN MANAGEMENT
- ● PART OF THE MUNICIPAL UMP
- ○ FINANCIAL CAPACITY OF THE MUNICIPALITY
- ○ INSTITUTIONAL CAPACITY OF THE MUNICIPALITY
- ○ BUILDING MAINTENANCE PLAN
- ○ BENEFICIARY EDUCATION
- ○ PRECINCT MAINTENANCE PLAN
- ○ FINANCIAL CAPACITY (PMP)
- ○ INSTITUTIONAL CAPACITY (PMP)

CONCEPTUALIZED BY THE MONITORING & EVALUATION, KNOWLEDGE MANAGEMENT AND RESEARCH PLANNING UNIT
DATE: 30TH MARCH 2020
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HDA

# RISKS & MITIGATION FOR SPATIAL TRANSFORMATION IN BAKENPARK 6&7

## OVERVIEW

3 | 0 | 1 | 1

| | |
|---|---|
| Risk | - Housing opportunities may not be linked to beneficiaries and title deeds<br>- There is a need to ascertain whether the densities created conform to the standards.<br>- There is a need to ascertain whether the housing yield is addressing the housing need as identified in the NHNR |
| Mitigations | - Relationships need to be established with deeds office, project and construction management (HDA, 2019-2021).<br>- In planning, incorporate the National Housing Needs Register to identify beneficiaries (HDA, 2019-2021)<br>- Refer to benchmarks for density standards. |

## LAND VALUE-ADD [EXISTING]

9 | 9 | 0 | 11

| | |
|---|---|
| Risk | - Some access to services and amenities are not currently available (See red flags). |
| Mitigations | - Consider accessibility to amenities by different modes of transport.<br>- Consider distance when planning amenities that are needed (refer to benchmark documents) |

## INTEGRATION [PLANNED]

13 | 9 | 0 | 7

| | |
|---|---|
| Risk | - Not all amenities cater for the population need (current and development increase) in the area. |
| Mitigations | - Consider the population size (both current and increase) when planning and designing the project.<br>- Make sure layout plans design and plan for supportive amenities and services<br>- Consult with various stakeholders sector departments to influence their plans and investments based on housing intervention. In planning, province and local government to align planning and budget and liaise with sector departments and SOEs regarding implementation (HDA, 2019-2021). |

## SOCIO-ECONOMIC DEVELOPMENT

7 | 0 | 0 | 4

| | |
|---|---|
| Risk | - SMMEs and informal trading may lack enough sites<br>- May need more mixed land use sites |
| Mitigations | - Encourage stands and spaces for SMMEs, informal trading and mixed land uses.<br>- Consider stands for socio-economic activities when designing project layout plans |

## HS TRANSFORMATION SCORECARD

17 | 0 | 0 | 0

| | |
|---|---|
| Risk | - Potential risk of untransformed procurement. |
| Mitigations | - Once procurement begins encourage transformation compliance when acquiring developers, suppliers and contractors<br>- SMME training is required (HDA, 2019-2021). NHBRC to undertake inspection of contractors to ensure enrolment (ibid). In addition, NHBRC and other stakeholders to monitor milestones of delivery (HDA, 2019- 2021). |

## URBAN MANAGEMENT

8 | 1 | 0 | 0

| | |
|---|---|
| Risk | - No evidence of urban management plans |
| Mitigations | - HDA needs to establish an “IRDP Urban Management and Maintenance Fund” as a “central cog to enabling a dedicate funding arrangement and allocation of funds” (HDA, 2017c: 62).<br>- HDA needs to run dedicated “beneficiary awareness and education campaigns” on asset value throughout the life-cycle of a project and post tenancy (HDA, 2017c: 59).<br>- “Encourage municipalities to mobilize communities to create urban management plans” (HDA, 2019- 2021). |

## QUALITY

4 | 0 | 0 | 0

| | |
|---|---|
| Risk | - The project may not be introducing innovative technologies such as solar panels, water harvesting etc. |
| Mitigations | - Encourage municipalities need “to plan, design and incorporate environmental sustainability elements in HS projects” (HDA, 2019-2021).<br>- Encourage developer “to innovate and provide alternative typologies and technologies whilst creating awareness to the public” (HDA, 2019-2021). |

CONCEPTUALIZED BY THE MONITORING & EVALUATION, KNOWLEDGE MANAGEMENT AND RESEARCH PLANNING UNIT
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# SPATIAL TRANSFORMATION BASELINE

## PDA: PORT ST JOHNS, PORT ST JOHNS LOCAL MUNICIPALITY

### TRACKING INDICATORS

ANALYSED WITH BENCHMARKS B

### OVERVIEW

CURRENT PROJECTS IN THE PDA:
-3 UISP PROJECTS

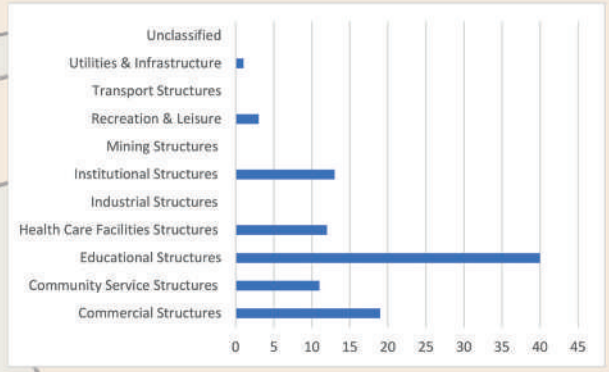
TBC ENVISIONED HOUSING YIELD

67% DEVELOPABLE LAND
TBC CURRENT DENSITY UNITS/HA
407HA LAND SIZE PDA (HA)
1126 CURRENT RESIDENTIAL UNITS

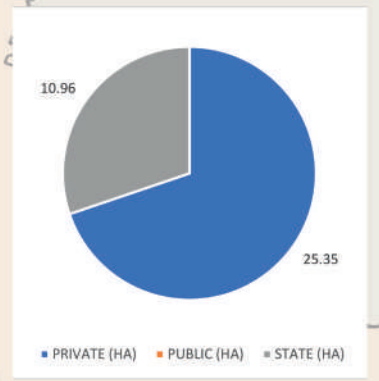
- ENVISIONED HOUSING YIELD (HOUSING NEED)
- BREAKDOWN OF HH OPPORTUNITIES (TYPOLOGY)
- HH OPP = BENEFICIARIES = TITLE DEEDS (FIN YEAR)
- DENSITY (ANALYSIS)
- TRANSVERSAL ALIGNMENT (ANALYSIS)
- DEVELOPABLE LAND

### MIXED LAND USE

NUMBER OF NON-RESIDENTIAL STRUCTURES




### VACANT LAND OWNERSHIP




### AMENITIES AND SERVICES

MEASURED FOR CURRENT POPULATION

EDUCATIONAL AMENITIES
- EARLY CHILDHOOD DEVELOPMENT CENTRES
- PRIMARY SCHOOL
- SECONDARY SCHOOL
- TERTIARY FACILITY

HEALTH AMENITIES
- PRIMARY HEALTH CARE CLINICS
- COMMUNITY HEALTH CENTRES

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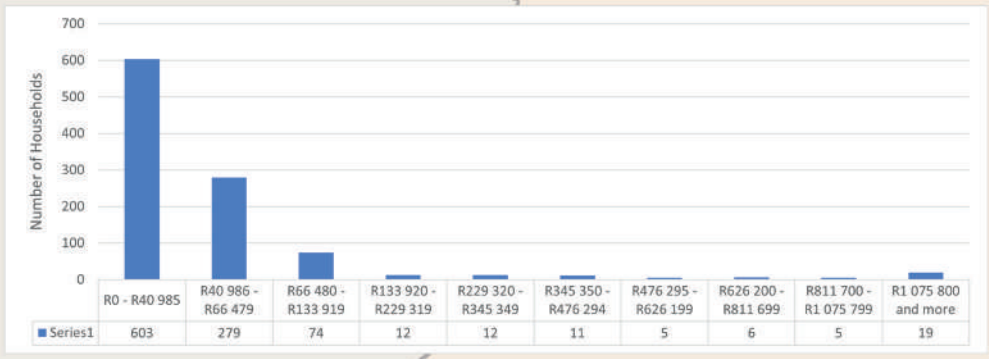
COMMUNICATION SERVICES
- POST OFFICES/ POSTAL AGENCIES/ PO BOXES
- ICT ACCESS HUBS/ INFORMATION CENTRES

### SOCIO-ECONOMICS

ANNUAL HOUSEHOLD INCOME OF PDA




| | R0 - R40 985 | R40 986 - R66 479 | R66 480 - R133 919 | R133 920 - R229 319 | R229 320 - R345 349 | R345 350 - R476 294 | R476 295 - R626 199 | R626 200 - R811 699 | R811 700 - R1 075 799 | R1 075 800 and more |
|---|---|---|---|---|---|---|---|---|---|---|
| Series1 | 603 | 279 | 74 | 12 | 12 | 11 | 5 | 6 | 5 | 19 |

TOTAL POPULATION: 2438

### INFRASTRUCTURE

WATER AND SEWER

27.88% FLUSH TOILETS IN THEIR HOMES
9.53% ACCESS TO FLUSH TOILET
14.21% CHEMICAL TOILETS
1.22% PITLATERINE WITH VENTILATION
21.23% PITLATERINE WITHOUT VENTILATION
2.29% BUCKET SYSTEM
5.56% OTHER

ELECTRICITY

71.14% ELECTRICITY ACCESS
20.58% CANDLES
6.03% PARAFFIN
1.65% SOLAR
0.29% NONE
0.30% GAS

ROAD INFRASTRUCTURE

TBC THE AREA HAS TRANSPORT INFRA-STRUCTURE CONNECTED TO SOCIAL AMENITIES

### TRANSPORT NETWORKS & NMT

0 SUBURBS SERVED BY TRANSPORT STATIONS
- PUBLIC MODES OF TRANSPORT
- NMT [WALKWAYS/CYCLE LANES]

CONCEPTUALIZED BY THE MONITORING & EVALUATION, KNOWLEDGE MANAGEMENT AND RESEARCH PLANNING UNIT
DATE: 31ST MARCH 2021
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HDA

## NOTES

Reasonable care has been taken in the preparation of this report. The information contained herein has been derived from sources believed to be accurate and reliable. The Housing Development Agency does not assume responsibility for any error, omission or opinion contained herein, including but not limited to any decisions made based on the content of this report.

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HOUSING DEVELOPMENT AGENCY
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