CITY OF POLOKWANE

DALMADA/KALKFONTEIN PRECINCT PLAN – 2023

Final Draft

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1. Introduction

Bushland Developers was appointed by the City of Polokwane to compile a SPLUMA compliant Precinct plan for the Dalmada/Kalkfontein area in order to enhance land use planning and development whilst achieving environmental, social and economic objectives.

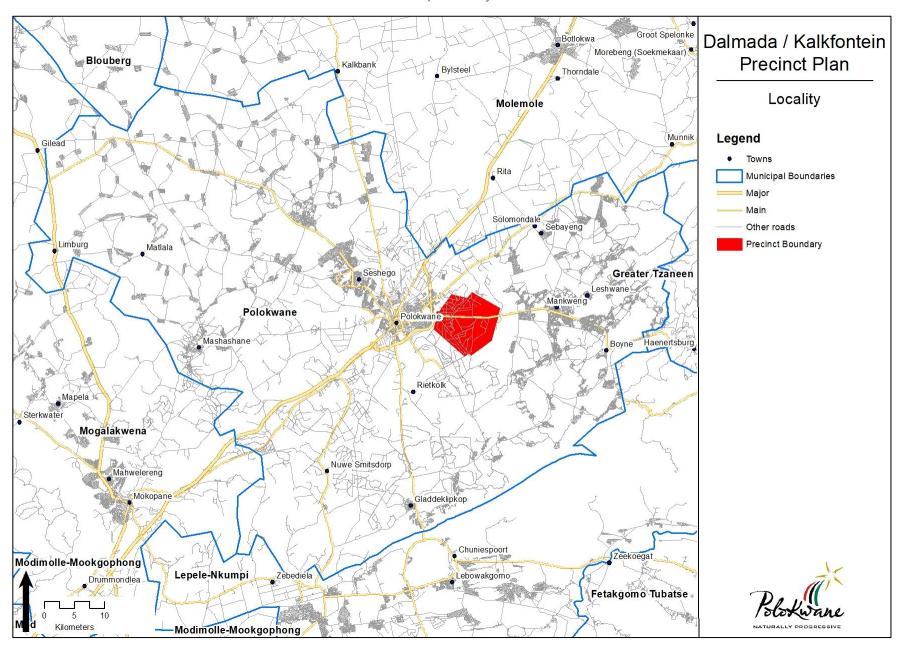
Typically, a precinct is a defined geographic area with specific characteristics, competitive advantages, and growth potential within the wider spatial context of the municipality. The purpose of a precinct plan is twofold:

- Identify projects both public and private to be undertaken in a precinct to achieve certain objectives, e.g. kickstart new development, bring about regeneration or manage development pressure; and
- Guide future development through the identification of appropriate land uses and built form, with guidelines that could be used in the assessment of land-use applications.

The precinct plan establishes a spatial vision (supporting that of City of Polokwane) for the precinct and sets 7 objectives that will guide the future development of the precinct.

1.1. Background

Dalmada/Kalkfontein in an area situated in the jurisdiction of the City of Polokwane Municipality. The Precinct is located to the east Flora Park along the R71. The Precinct consists of Dalmada Agricultural holdings as well as the farms Baskoppie, Bochum, Geluk and Kalkfontein, see Map 1 for a locality plan.



2. Policy Context

This section will discuss the following Legislations, Policies and Plans that have beenidentified to be relevant in the development of the Kalkfontein/Dalmada Precinct Plan.

2.1. National Legislation, Policies and Plans

2.1.1. South African Constitution, 1996

The Constitution of South Africa, contained in Act 108 of 1996, is the supreme law of South Africa in which no other law or government action can supersede its provisions. Amongst other things, it prescribes different functions to different tiers of government ensure the equitable and functional distribution of roles, responsibilities and duties.

Section 152 of the Constitution clearly mandates that it is the responsibility of Local Government:

- To provide a democratic and accountable government forlocal communities;
- To ensure provision of services to communities in a sustainable manner;
- To promote social and economic development;
- To promote a safe and healthy environment; and
- To encourage the involvement of communities and community organizations in the matters of local government.

Section 153 also states that a municipality must:

- Structure and manage its administration, and budgeting and planning process to give priority
 to the basic needs of the community, and to promote the social & economic development of
 the municipality; and
- Participate in National & Provincial development programmes.
- Chapter 3 of the Constitution is dedicated towards 'Co-operative Government', which
 concerns the involvement, participation and sharing of information across the different tiers
 of government. It recognises that all levels of government are important and play a critical
 role in taking the country forward. Therefore, there should be a free flow of information
 between all spheres of thegovernment.

Implications for the Dalmada/Kalkfontein Precinct Plan:

The Polokwane Municipality is constitutionally mandated to undertake local planning for its municipal area, as well as achieve co-operative governance. This Precinct Plan seeks to provide a holistic planning approach that will guide development of the municipality into the future whilst facilitating coordination between the different sector departments and government spheres to achieve coherent and integrated development.

2.1.2. SpatialPlanning and Land Use Management Act (SPLUMA), 2013

The Spatial Planning and Land Use Management Act, 2013 (Act 16 of 2013) was promulgated to provide a framework for spatial planning and land use management throughout the country. The Act provides an understanding into the relationship between spatial planning and land use management system including monitoring, coordination and review of spatial planning and land use management system at different spheres of government.

SPLUMA aims to redress the fragmented and historical spatial imbalances of the pastand promote integration of principals of sustainable development. Section 3 of SPLUMA states that the Act aims to develop a 'uniform, effective and comprehensive system' of planning that 'promotes social and economic inclusion'.

Chapter 2 of the SPLUMA outlines a host of development principles that should apply in the preparation of the MSDF for spatial planning, land use management and land development in the municipal area. These are:

- a) The principle of Spatial **Justice**:
- Deal with spatial imbalances and include areas that were previously excluded.
- Redress access to land for the previously disadvantaged/ excluded areas
- Plan for incremental upgrading and secure tenure
- Incorporate land use management systemsfor previously disadvantaged/ excluded area
- Ensures equitable distribution and increase access to social infrastructure and addresses the injustices of the past.
- b) The principle of Spatial **Sustainability**:
- Promote land development that is within the fiscal, institutional and administrative means of the country

- Protect prime agricultural land and environmental resources
- Promote consistency of land use measures in accordance with environmental management systems
- Promote and stimulate the effective and equitable functioning of land markets
- Carefully consider social and infrastructural costs of land development
- Promote development in sustainable locations and limit urban sprawl
- Establish viable communities;

c) The principle of Spatial **Efficiency**:

- Land Development optimize efficient use of resources and infrastructure
- Minimise negative financial, social, economic or environmental impacts
- Efficient and streamlined development application procedures and timelines

d) The principle of Spatial **Resilience**:

 Promote flexibility in spatial plans, policies and land use management systems are accommodated to ensure sustainable livelihoods in communities most likely to suffer the impacts of economic and environmental shocks.

e) The principle of Good Governance:

- An integrated approach to land use and land development guided by spatial planning and land use management systems
- Free flow of information plans and policies between and within tiers of government
- All land use and land development requirements met timeously
- Empowering citizens

Implications for the Dalmada/Kalkfontein Precinct Plan

The compilation of the Precinct Plan will be guided by the SPLUMA principles that seek to promote efficient and effective spatial planning and land-use management practices. Ultimately, the implementation of the Precinct Plan should give effect to the SPLUMA development principles as explained above.

2.1.3. National Spatial Development Perspective, 2006

The National Spatial Development Perspective (NSDP) first adopted by Cabinet in 2003 and later reviewed in 2006, is South Africa's first set of national spatial guidelinesthat establish an overarching mechanism which: • Enables a shared understanding ofthe national space economy; and • Provides a principle-based approach to coordinateand guide policy implementation across government Its ultimate purpose is to fundamentally reconfigure apartheid spatial relations and to implement spatial priorities that meet the constitutional imperative of providing basic services to all and alleviating poverty and inequality. The NSDP puts forward five normative principles tobe considered when making infrastructure investment and development spending decisions by all three spheres of government:

- Principle 1: Rapid economic growth that is sustained and inclusive is a prerequisite for the achievement of other policy objectives, amongst which poverty alleviation is key.
- Principle 2: Government has a constitutional obligation to provide basic services to all citizens (e.g., water, energy, health and educational facilities) wherever they reside.
- Principle 3: Beyond the constitutional obligation identified in Principle 2 above, government spending on fixed investment should be focused on localities of economic growth and/or economic potential in order to gear up private sector investment, stimulate sustainable economic activities and create long-term employment opportunities.
- Principle 4: Efforts to address past and current social inequalities should focuson people, not places. In localities where there are both high levels of poverty and demonstrated economic potential, this could include fixed capital investment to exploit the potential of those localities. In localities with low demonstrated economic potential, Government should, beyond the provision of essential services, concentrate primarily on human capital development by providing social transfers such as grants, education and training and poverty relief programmes and reducing migration costs by providing labour market intelligence so as to give people better information, opportunities and capabilities to enable people to gravitate, if they chose to, to localities that are more likely to provide sustainable

- employment and economic opportunities. In addition, sound rural development planning, aggressive land & agrarian reform& expansion of agricultural extension services is crucial.
- Principle 5: To overcome the spatial distortions of Apartheid, future settlementand economic
 development opportunities should be channelled into activity corridors and nodes that are
 adjacent to or link the main growth centres. Infrastructure investment should primarily
 support localities that will become major growth nodes in South Africa and the SADC region
 to create regional gateways to the global economy.

Implications for the Dalmada/Kalkfontein Precinct Plan

The Municipality should primarily follow approach as per the abovementioned principles in its development initiatives, by stimulating investment, redressing past social and spatial inequities as well as restructuring the space economy in its jurisdiction. The Precinct Plan should therefore: i) Clearly address spatial restructuring; ii) Reflect on services delivery backlogs and present a position on the provision services, especially in rural areas (areas of no/ low development potential); iii) Identify growth points/ nodesand corridors where investment will be made in infrastructure and must include strategies to encourage orderly development in these areas; iv) Reflect on and make proposals for spatial implications of social investment.

2.1.4. Integrated Urban Development Framework (IUDF), 2014

The IUDF, South Africa's national urban policy, takes as one of its key drivers the NDPs requirement that South Africa should see meaningful and measurable progress in the pursuit of more functionally integrated, balanced and vibrant settlements. It builds on and responds to a variety of chapters in the NDP, butnotably Chapter 8. This is evident in its guiding vision of "liveable, safe, resource-efficient cities and towns that are socially integrated, economically inclusive and globally competitive, and where residents actively participate in urban life". The IUDF puts forward a "new deal" for South Africa's cities and towns, which it sees as being on a continuum, ranging from the very large metropolitan regions to the smallest towns in rural South Africa. This new dealentails (1) maximising the potential of urban areas, and (2) integrating planning, budgeting and investment in such a way that it improves and enhances urban form and improves the performance or urban areas. The IUDF makes a strongcase for:

- Working with and sharing the urban spaces built up during colonial and Apartheid times;
 and
- 'Retrofitting' our urban spaces to optimise their footprintand produce compact, coordinated and well-connected cities and towns.

The IUDF puts forward "four strategic goals" for all urban areas, i.e.

- spatial integration,
- inclusion and access,
- growth, and
- governance.

Furthermore, the IUDF proposes the following "nine policy levers" to achieve the abovementioned goals.

- Integrated urban planning and management;
- Integrated transport and mobility;
- Integrated and sustainable human settlements;
- Integrated urban infrastructure;
- Efficient land governance and management;
- Inclusive economic development;
- Empowered active communities;
- Effective urban governance; and
- Sustainable finances.

The IUDF also introduces the following three "cross-cutting priorities" that are to be used in the conceptualisation and implementation of the nine policy levers:

- (1) rural-urban interdependency,
- (2) urban resilience,
- (3) urban safety.

In essence the IUDF makes strong, guiding statements in the pursuit of shared, inclusive, resilient and liveable urban settlements by advocating that South Africa hasdifferent types of cities and towns that perform different roles, and have different requirements. Thus, it has a multi-faceted implementation plan, including short-term interventions which require the active participation of a range of stakeholders, including all three spheres and sectors of government, the private sector, NGOs, NPOs and local community organisations.

2.1.5. The 2030 - National Development Plan (NDP), 2012

The National Development Plan was developed as a plan that sets out an integrated strategy for accelerating growth, eliminating poverty and reducing inequality by 2030. The NDP, supported by the New Growth Path and other relevant programmes, provides a platform to look beyond the current constraints to the transformation imperatives over the next 20 to 30 years.

In particular Chapter 8 of the NDP sets out key human settlements targets which among others focus on transforming human settlements and the national space economy, which include:

- more people living closer to their places of work;
- better quality public transport;
- more jobs in proximity to townships; as well as
- environmental sustainability and
- improvement of rural economies.

To achieve these targets the NDP advocates strong measures to prevent further development of housing in marginal places, increased urban densities to support public transport, incentivising economic activity in and adjacent to townships; and engaging the private sector in the gap housing market.

Furthermore, the NDP aims to address challenges inherited during the colonial and apartheid space economy, by putting forward series of proposals resting on the following "six pillars", i.e.:

- Uniting all South Africans around a common programme to achieveprosperity and equity;
- Promoting active citizenry to strengthen development, democracy and accountability;
- Bringing about faster economic growth, higher investment and greaterlabour absorption;
- Focusing on the key capabilities of people and the state;
- Building a capable and developmental state; and
- Encouraging strong leadership throughout society to work together to solveproblems.

In essence, the NDP aims to eliminate poverty and reduce inequality by 2030 by integrating previous strategic policies with new approaches to make the country's economy work better for all. The NDP offers a long-term perspective which defines adesired destination and identifies the role of different sectors which society needs to play in order to reach it aims in the year 2030. The plan focuses on addressing threecore challenges which are: (a) reducing poverty, (b) inequality and (c) unemployment.

Implications for the Dalmada/Kalkfontein Precinct Plan

The Precinct Plan will identify explicit spatial restructuring strategies which must include the identification of priority Precincts for spatial restructuring.

2.1.6. Comprehensive Rural Development Programme (CRDP), 2009

The CRDP was introduced in 2009 as an initiative that supports rural communities in initiatives of self-empowerment and rural local economic development. It seeks to address the following challenges facing rural communities:

- under-utilisation of natural available resources in mineral resources, tourismresources, agriculture and manufacturing;
- poor or lack of access to socio-economic infrastructure; services, publicamenities and government services;
- limited or lack of potable water for household or agricultural development;
- low literacy, skills levels and migratory labour practices; and
- slow pace of resolving restitution claims and land tenure issues.

One of the primary aims of CRDP is to improve rural economies by means of using resources available and providing support as government with the aim of creating vibrant, self-sustainable, self- sufficient and equitable rural communities.

The CRDP was introduced to fight poverty and improve food security by means of agrarian transformation, land reform and use of natural resources and provision of basic services.

Land reform programme provides an appropriate tool that can be used to kick-start rural development driven by communities and supported by various stakeholders including the Department of Rural Development and Land Reform which will act as the coordinator, facilitator, catalyst and initiator of programmes, policies, strategies and resources.

Implications for the Dalmada/Kalkfontein Precinct Plan

The Precinct Plan will: identify suitable rural development initiatives and indicate accessible locations for these; identify opportunities for the improvement of lives of rural people, such as food gardens and their locations; reflect on land reform programmes and make suggestion for improvement of the programme.

2.1.7. Draft National Spatial Development Framework, 2019

The NSDF must accelerate the spatial transformation and ensure that equitable outcomes are achieved. It must do so in full recognition of (1) the need for urgency to act on redressing the apartheid spatial legacy, and (2) the scale of what the redressrequires in terms of approach, resource use, and state capability. It needs to ensure that segregated development is reversed, and fundamentally improve the spatial quality, liveability vibrancy and productive capacity of places in which Black families live. The NSDF must provide guidance on the minimum amenities, functions and services that different types of settlements in the country must have or provide.

The NSDF must ensure that the ecological base on which all livelihoods and economic growth depend is protected and harnessed. As such, it must provide for

(1) the development of sustainable human settlements in the national space with thelong-term future in mind, and (2) the wise effective and inclusive use and enjoyment of the country's land, water and energy resources. The Spatial Development Vision and Mission that is proposed for the country, based on these drivers, builds on the overarching goal of equity, unity and connectedness.

Implications for the Dalmada/Kalkfontein Precinct Plan

The high-level frames of the NSDF will be incorporated into the Precinct Plan, thereby establishing the vertical linkage to the national spatial development plan (NSDF).

2.1.8. National Infrastructure Plan, 2012

The South African Government adopted a National Infrastructure Plan in 2012 with the aim of transforming the economic landscape while simultaneously creating significant numbers of new jobs and strengthen the delivery of basic services. The plan also supports the integration of African economies.

The National Infrastructure Plan (NIP) seeks to promote:

- re-industrialisation through manufacturing of inputs, components and machinery.
- skills development aimed at critical categories;
- greening the economy; and
- empowerment.

The NIP comprises 18 identified Strategic Integrated Projects (SIPs) which integratemore than 150 municipal infrastructure plans into a coherent package. The proposedSIPs entail both social and economic infrastructure across all nine provinces, but withan emphasis on lagging regions. They comprise catalytic projects that can fast-trackdevelopment and growth. Note that many of the components within the SIPs have anational footprint such as the infrastructure programmes for school building, healthcare facilities and expanding access to broadband.

2.1.9. Agricultural Policy Action Plan, 2015

The Agriculture Policy Action Plan (APAP) seeks to assist in the achievement of Outcome 4 (Decent Employment through Inclusive Growth), Outcome 7 (Comprehensive Rural Development and Food Security) and Outcome 10(environmental assets and natural resources that are well protected and continually enhanced) of the MTSF (2014-2019) and aligns itself to the New Growth Path (NGP)and the National Development Plan (NDP).

APAP focuses on a discrete number of value chains identified as strategic in meeting the objectives of the NGP, NDP and IPAP and these are:

- Contribution to food security;
- Job creation;
- Value of production;
- · Growth potential; and

Potential contribution to trade balance (including via export expansion and import substitution).

APAP recognises agriculture as a sector with significant job creation potential and with strategic links to beneficiation opportunities. When exploring the different models of rural development, there seems to be coherent global evidence that agriculture presents the best opportunities for the advancement of rural development agenda.

Agriculture plays a strategic role in respect of food security, agrarian transformation and rural development.

Implications for the Dalmada/Kalkfontein Precinct Plan

As a recommendation, the impact of APAP could also be intensified by exploring opportunities in the sectors outside of rural development and land reform.

2.1.10. National Environmental Management Act, (1998)

This Act establishes principles for decision-making on matters affecting the environment. In terms of the provision of NEMA, the following directives are relevant to development:

- Development must be socially, environmentally, and economically sustainable.
- Equal access to environmental resources, benefits, and services to meetbasic human needs.
- The utmost caution should be used when permission for new developments granted.

In addition, the Act requires during development attention must be taken to considerall relevant factors which have direct impact on planning and development, including the following:

- that the disturbance of ecosystems and loss of biological diversity are avoided, or, where they cannot be altogether avoided, are minimised and remedied;
- that pollution and degradation of the environment are avoided, or, where they cannot be altogether avoided, are minimised and remedied;
- that the disturbance of landscapes and sites that constitute the nation's cultural heritage is avoided, or where it cannot be altogether avoided, is minimised and remedied;
- that waste is avoided, or where it cannot be altogether avoided, minimised and reused or recycled where possible and otherwise disposed of in a responsible manner;
- that the use and exploitation of non-renewable natural resources is responsible and equitable, and takes into account the consequences of the depletion of the resource;
- that the development, use and exploitation of renewable resources and the ecosystems
 of which they are part do not exceed the level beyond which their integrity is
 jeopardised;
- that a risk averse and cautious approach is applied, which takes into account the limits
 of current knowledge about the consequences of decisions and actions;
- that negative impacts on the environment and on people's environmental rights be anticipated and prevented, and where they cannot be altogether prevented, are minimised and remedied; and
- Equitable access to environmental resources, benefits and services to meet basic human needs and ensure human wellbeing must be pursued and special measures may be taken to ensure access thereto by categories of persons disadvantaged by

unfair discrimination.

The participation of all interested and affected parties in environmental governancemust be promoted, and all people must have the opportunity to develop theunderstanding, skills and capacity necessary for achieving equitable and effective participation, and participation by vulnerable and disadvantaged persons must be ensured.

Decisions must take into account the interests, needs and values of all interested and affected parties, and this includes recognising all forms of knowledge, including traditional and ordinary knowledge.

Community wellbeing and empowerment must be promoted through environmental education, the raising of environmental awareness, the sharing of knowledge and experience and other appropriate means.

The costs of remedying pollution, environmental degradation and consequent adverse health effects and of preventing, controlling or minimising further pollution, environmental damage or adverse health effects must be paid for by those responsible for harming the environment.

The vital role of women and youth in environmental management and developmentmust be recognised and their full participation therein must be promoted.

Sensitive, vulnerable, highly dynamic or stressed ecosystems, such as coastal shores, estuaries, wetlands, and similar systems require specific attention in management and planning procedures, especially where they are subject to significant human resource usage and development pressure.

2.2. Provincial Spatial Plans and Policies

2.2.1. Limpopo Development Plan, 2015

The LDP aims to improve standards of living and to reduce poverty, unemploymentand the unacceptable levels of inequality. It aims to achieve this through sustainableeconomic, social, infrastructure and institutional development, with emphasis on transformation

The plan aims to focus its economic transformation drive on mining, agriculture, tourism, and manufacturing, as well as empowering SMMEs and Cooperatives. It also aims to strengthen support towards identified Growth Point areas while, the development of horticulture, meat, forestry and tourism clusters will be specifically aimed at promoting development in rural areas.

Implications for the Dalmada/Kalkfontein Precinct Plan

As a recommendation, the impact of LDP could be intensified by exploring opportunities in the economic, agriculture and tourism sectors in order to empower SMME's and to promote development within the Precinct area.

2.2.2. Limpopo Growth and Development Strategy, 2004

The Provincial Growth and Development Strategy (PGDS) was developed due to the need to put in place a development framework that should guide growth and development in Limpopo.

With its strong emphasis on improving the quality of life and sustainable development, the PGDS aims to create a conductive environment for the people of the province to participate in the provincial economy. It is informed by the mainly by the National Spatial Development Plan (NSDP), and all provincial documents that have a bearing on growth and development in Limpopo.

The primary objectives of PGDS are:

- To improve the quality of people's life;
- To promote employment opportunities and sustainable economic growth;
- To address unique social issues; and
- To promote participatory and efficient governance.

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The PGDS identifies development of corridors as one of the development strategies to concentrate economic activities within a defined spatial area. The R71 is one corridor which traverses the Precinct area.

Implications for the Dalmada/Kalkfontein Precinct Plan

The LGDS could promote growth and development within the Precinct area by creating a conductive environment for the residents and investors to participate in the economy.

2.2.3. Limpopo Provincial Spatial Development Framework, 2016

Limpopo Province reviewed and adopted its provincial Spatial Development Framework in 2016. All municipalities are therefore required as a matter of policy and in the spirit of cooperative governance to align with the adopted Limpopo Provincial SDF (Limpopo PSDF).

In its strategic vision the Limpopo PSDF - "...envisions a provincial spatial structure where the natural environment and valuable agricultural land in the rural areas are protected for future generations, with a strong, diverse and growing economy focused on a range of nodal areas and that offers its residents high quality living environments and good job opportunities in a sustainable manner."

In order to realise PSDF vision the following development objectives have been set, namely:

- Capitalize on the Province's strategic location within the SADC region;
- Improve regional and local connectivity to facilitate the movement of people, goods and services;
- Provide a strategic and coherent rationale for targeted public sector investment, including engineering, social and economic infrastructure, to optimize service delivery;
- Encourage urban and rural spatial restructuring as a necessity;
- Aggressively protect and enhance the Province's natural resources, including scarce fresh water sources and high biodiversity landscapes;
- Guard valuable agricultural land as a scarce resource and national asset;
- Consolidate and enhance the Province's ecotourism product; and
- Encourage and institutionalize the sustainable development of its massive mineral potential (and encourage green economy initiatives).

Implications for the Dalmada/Kalkfontein Precinct Plan

The Kalkfontein/Dalmada Precinct Plan should align itself to the provincial spatial development objectives based on its strategic location within the province and its competitive advantages in tourism, mining as well as agriculture and conservation.

2.3. Capricorn District Municipality Spatial Plans and Policies

2.3.1. Capricorn District Municipality Spatial Development Framework (CDM SDF, 2016)

The Capricorn District Municipality Spatial Development Framework (CDM SDF, 2016) provides guidelines to local municipality under its area of jurisdiction in terms of future development. This SDF endeavours to promote a consolidated settlement development in areas showing potential for growth, environmental protection and service delivery in order to bring about a sustainable and equitable development throughout the district area. In order to realize its vision for development, the CDM SDF (2017) Makes use of the following twelve development principles which represent the building blocks to the spatial development Framework of the Capricorn District Municipality:

- Principle 1: Consolidate and protect environmentally sensitive areas to ensure long term sustainability
- Principle 2: Enhance spatial efficiency by defining a range of urban and rural nodes in the district around which to consolidate economic development and infrastructure investment
- Principle 3: Establish a comprehensive movement network to link all activity nodes within the district and beyond, and to promote corridor development through land use transportation integration
- Principle 4: Consolidate community facilities at urban and rural nodal points to enhance "one-stop" access to such facilities for the community, and to contribute towards creating "critical mass" required to stimulate local economic development
- Principle 5: Direct infrastructure investment towards the activity nodes in the district, strategic development areas earmarked for the residential development and communities with excessive service backlogs
- Principle 6: Consolidate the tourism character of the district around the Polokwane and Mankweng clusters
- Principle 7: Optimise agricultural production and processing in all parts of the district
- Principle 8: Optimally utilize the mining potential in the district in such a way that a sustainable balance is maintained between mining, agriculture and the natural environment
- Principle 9: Concentrate industrial activities around Polokwane/ Mankweng cluster and agro processing at the Rural Nodes and Rural Service Centres, optimizing the available industrial infrastructure
- Principle 10: Enhance and consolidate commercial and business activities at each of the identifies nodal points and strengthens Polokwane City's identity as provincial and regional capital

- Principle 11: Achieve urban restructuring and spatial justice by way of mixed income residential development around identified nodal points and within identified Strategic Development Areas
- Principle 12: Compile Community Based Rural Development Plans for identified Rural Intervention Areas.

The district SDF provides guidelines in terms of what local municipality under its jurisdiction such as Polokwane Local Municipality should concentrate on and it is upon the municipality formulate localised principles, programs projects, strategies and guidelines in line with vision and key issues of the municipality. Essentially, the above-mentioned principles are also applicable and relevant to address the challenges of the Polokwane Local Municipality and hence will also be considered when proposals are developed

2.3.2. Capricorn District Municipality IDP 2016-2021

Among the strategic objectives reflected in the District IDP (Capricorn District Municipality IDP 2017/18), the following have a direct bearing on the spatial planning environment within Polokwane municipality and shall inform the spatial vision:

- 1. To provide sustainable basic services and infrastructure development;
- 2. To improve spatial development and environmental management;
- 3. To enhance financial viability and management;
- 4. To enhance conditions for economic growth and job creation; and

It is important to also note the consistency of these objectives with the local municipality objectives, therefore indicating an alignment of development imperatives between the two local government entities.

2.3.3. Capricorn District 2030 Growth and Development Strategy (CDM 2030 GDS)

The 2030 Growth and Development Strategy is a long-term strategy for integrated development in Capricorn District Municipality. The CDM 2030 strategy casts a vision that inspires development in all areas of CDM; stimulate economic growth, and create employment that fulfils aspirations of citizens, as well as strengthening the linkages within the economy and addressing the structural inefficiencies of the district and local municipalities. Based on the analysis' diagnostic report, the following key strategic priorities have been identified to form the basis of this strategy.

Among the key strategic priorities identified in the CDM 2030 GDS, the following are key in

informing the spatial vision of Polokwane:

- Obtaining access to land for development;
- Growing and expanding the growth points;
- Promotion of endogenous growth within the targeted areas;
- Functional Land Use Management Systems;
- Optimise urban-rural linkages;
- Environmental management;
- Land claims have a severe impact on strategic planning for the area and should be a priority to be addressed;
- Protect valuable agricultural land;
- Protecting, managing and enhancing natural/ environmental assets;
- Sustainable resource management and use;
- Promotion of economic and social infrastructure:
- Infrastructure demand management planning;
- Management and maintenance of infrastructure;
- Upgrading the existing road network to improve accessibility and linkages between core areas and rural areas;
- · Water Resource Management;
- Promotion Integrated Human Settlements;
- Human Capital development;
- Skills Development Support;
- Growing the first economy;
- Developing the second economy;
- Building knowledge economy;
- Developing a sustainable and diversified industrial base;
- Good governance and partnership;
- Public Participation;
- Financial Viability; and Municipal Transformation and Organisational Development

2.3.4. Capricorn District Rural Development Plan (2016)

The District Rural Development Plan (DRDP) for Capricorn District Municipality (CDM) pursues to contribute to the transformation of the rural economy of the district municipality. Therefore, forming part of the implementation of the National Development Plan for radical transformation of rural economies to challenge poverty, unemployment and socio-economic inequalities within the district.

The aim of the Capricorn District Municipality (CDM) District Rural Development Plan (DRDP) is to illustrate appreciation of agricultural sector development of on-going land reform process as well as Land Tenure systems that continue to evolve. Hence with the vision the proposed development objectives with their own development actions have been identified as illustrated below: -

- Objective 1: Improving Productivity & Competitiveness of the Agricul-ture Sector;
 - ✓ Development Action 1: Optimising of Agri-Parks;
 - ✓ **Development Action 2**: Supporting small scale farmers by implementing survival strategies and absorbing small businesses into the mainstream economy,
 - ✓ **Development Action 3**: Development of Agro Tourism in Capricorn DM
 - ✓ **Development Action 4**: Increase supply of water for Agricultural use,
 - ✓ **Development Action 5**: Addressing the effects of climate change on agriculture,
 - ✓ **Development Action 6**: Agri-Hub and Farmer Production Support Unit establishment and developments,
 - ✓ **Development Action 7**: Implement Identified agricultural anchor projects,
 - ✓ **Development Action 8**: Development of {red and white meat cluster as well as citrus cluster).
 - ✓ **Development Action 9**: Fast track the process of addressing land use management schemes (LUMS) and the land development in the DM.
- Objective 2: Promote Integrated Human Settlements;
 - ✓ **Development Action 1:** Reduction of Service Delivery Backlogs,
 - ✓ **Development Action 2**: Promoting Integrated Rural Spatial Planning,
- Objective 3: Investment in Rural Revitalization;
 - ✓ Development Action 1: Promoting the Renewal of Rural Towns and Villages {Nodal and Growth points},
 - ✓ **Development Action 2**: Completion of Current Rural Development-Oriented Projects,

- ✓ **Development Action 3**: Investment in Physical Infrastructure,
- ✓ Development Action 4: Develop and Invest in the Mining Sector,
- ✓ **Development Action 5**: Development of a Renewable energy Research Park.
- Objective 4: Improving Tourism Competitiveness;
 - ✓ **Development Action 1**: Harnessing the Cultural Heritage Development Corridors.
 - ✓ **Development Action 2**: Enhance the Tourism Sector to create employment and Local Economic Development,
 - ✓ **Development Action 3**: Upgrading Local Tourists Accommodation.
- Objection 5: Conserving the Natural Environment;
 - ✓ **Development Action 1**: Formulation of the Capricorn Biodiversity Conservation Plan

2.4. City of Polokwane Spatial Plans and policies

2.4.1. Polokwane Municipal Spatial Development Framework, 2010

The Precinct area falls under the Potential Development Area (PDA) 1, which is the area alongside DC1 and between Polokwane PGP and Mankweng DGP, which includes Dalmada Agricultural Holdings, Baskoppies, and Myngenoegen Agricultural Holdings as well as farm portion of Kalkfontein. The Precinct area falls on either side of the R71 road which is an activity corridor.

The Spatial Development Framework give emphasis to on the protection of agricultural land. The Precinct area is mostly agricultural land and according to the SDF, agricultural development in the municipal area holds some promise for expansion due to its favourable location with regard to local as well as national markets. Proximity to these markets makes economies of scale in farm production a reality that should be capitalized on. Protecting agricultural land with potential and maintain sustainable farming units are principles that should be applicable in order to protect the agricultural potential of the area.

The effect the SDF could have on the Precinct plan is the protection of agricultural land as well as intensified economic opportunities through agriculture and tourism.

2.4.2. Polokwane Integrated Development Plan, 2021 – 2026

The IDP has identified the following spatial challenges affecting the Precinct area:

- Inadequate ownership of land in rural areas;
- Illegal land uses;
- Land claims;
- Land invasions.

According to the IDP, the Department of Rural Development and Land Reform intends to release land owned by state to the Municipality in order to unlock development and promote ownership in areas affected by invasions such as Mamahule which will be the initial intervention areas.

The R71 corridor (starting from Ramathlodi Park to Boyne) is one of the identified Priority Housing Development Areas of the City. These are experiencing fast growth and somewhat unplanned development. Transforming these regions is crucial in overall objective of creating integrated and sustainable human settlements.

Implications for the Dalmada/Kalkfontein Precinct Plan

- Minimising and curtailing illegal land uses
- Acknowledging land claims
- Addressing land invasions
- Prioritising housing development within the identified areas in the Precinct.

2.4.3. Local Economic Development Strategy, 2019

The Local Economic Development (LED) strategy advocates for the strengthening of the multisectoral response against the rising levels of unemployment, inequality and poverty facing Polokwane Municipality. The following objectives were identified in the LED strategy:

- Prioritization of high job creation investments
- Unleash sectoral potential and growth
- Enhance investment competitiveness
- Widen access to economic opportunities and choices
- Strengthen multi-sectoral response

Implications for the Dalmada/Kalkfontein Precinct Plan

The LED strategy aims to prioritise investment projects in order to promote economic inclusivity and social cohesion and improve economic development coordination capabilities through various interventions within the Precinct area. Public Private Partnerships and collaborations between businesses and the Municipality will assist in developing and growing the economy of the Precinct area.

2.4.4. Agricultural Development Strategy, 2019 - 2025

The Agricultural Development Strategy seeks to promote of urban agriculture as an integral element of the city's efforts to deliver a food-secured municipality. The participation of youths in urban agriculture is also central to this initiative. The major barrier that impedes efforts to stimulate urban agriculture activity is the shortage of arable land. According to the ADS, parts of the Precinct area can be turned into a fully-fledged urban agriculture hub. Untapped urban agricultural opportunities can be unlocked in small-to medium sized plots along the DC1 corridor.

Plot holders within the Precincts farming belt are rezoning their once booming farming plots into lodges and bed and breakfast ventures. With proper planning and ring-fenced funding, the Precinct can be turned into the City of Polokwane's acclaimed eco-tourism hub. The belt is known for its small scale but high-value game farming projects.

Implications for the Dalmada/Kalkfontein Precinct Plan

The promotion of urban agriculture according to the ADS, will lead to investment in agriculture and eco-tourism within the Precinct area.

2.4.5. Polokwane Economic Growth and Development Plan, 2030

The majority of the Polokwane Municipal area is still rural and not characterised by high levels of developed land, again supporting the opportunity for development of Agricultural activities. The R71 (DC1) is a key trade, tourism, agriculture corridor which forms part of the Precinct area. The objectives are:

- Exploit existing economic potential;
- Promote job creation;
- Attract Investment.

The EGDP states that currently in Polokwane specialised activity clustering is relatively limited.

Specialised clusters create the opportunity for complimentary functions to support each other and in so doing create growth in the economy. Establishing attractive economic clusters to support the primary, secondary and tertiary economy will address the above-mentioned objectives.

Implications for the Dalmada/Kalkfontein Precinct Plan

The R71 corridor is being used to the Municipality's advantage in creating specialized clusters, one of them being the Kalkfontein/Dalmada Precinct Plan. The Precinct as a specialized cluster will assist in growing the economy and the main industries (agriculture and tourism) by increasing competitiveness and promoting innovation.

2.4.6. Comprehensive Integrated Transport Plan, 2012 - 1017

The Precinct area is located along the R71 (DC 1), a major commuter transport corridor, which links the CBD and Mankweng and will play a role integrating the CBD and Mankweng. The integration is one of the long-term visions of the Comprehensive Integrated Transport Plan.

According to the CITP, land uses play a vital role in estimating transportation movement, based on estimating travel patterns of residents and visitors. It notes that it is necessary to assign trip generating land uses and trip attractors to separate transport zones.

Implications for the Dalmada/Kalkfontein Precinct Plan

The concentration of economic activity and job-creation projects will be located in close proximity of settlement clusters along the development. This will assist in capitalising on the comparative advantages the Precinct has to offer.

3. Context, Role and Issues

3.1. The Biophysical Environment

3.1.1. Topography

The typography of any area is an important form giving element. The elevation in the Precinct changes from 1240m above sea level (at the lowest) to around a 1405m above sea level. There are some low koppies in the study area that may affect future development. The elevation is shown on Map 2.

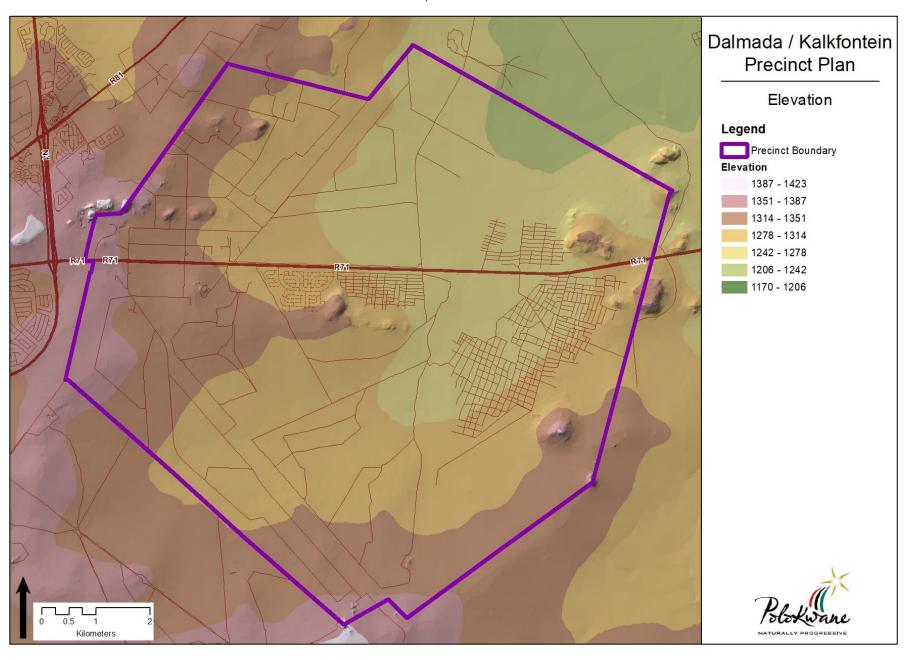
Map 3 provides an indication of slope, derived from the elevation profile. The Precinct is generally quite flat (0-8% slope) with limited low koppies with a gradient between 9 and 25% present. The table below illustrates the type of development normally associated with each slope category.

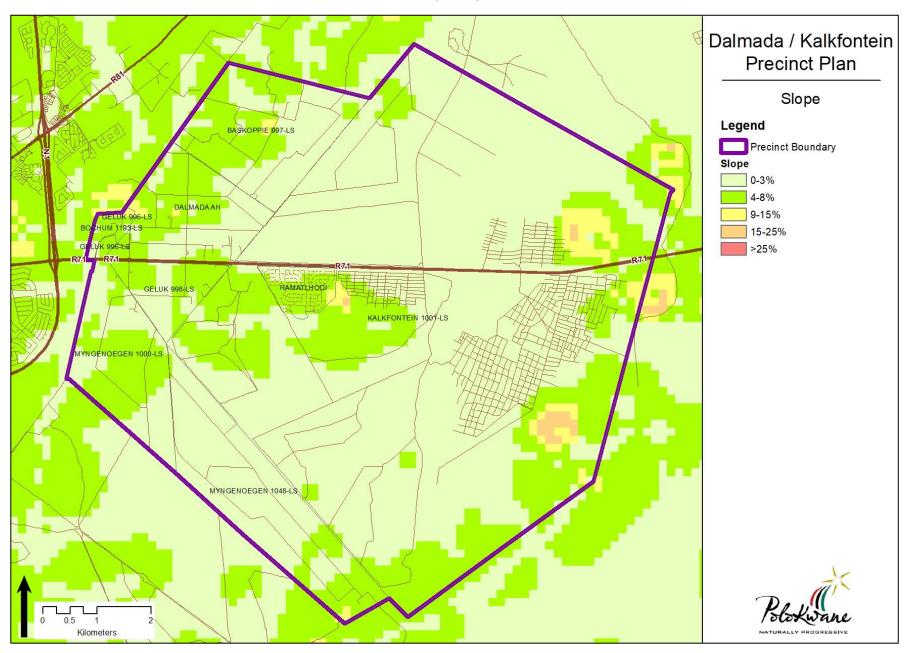
Table 1: Development characteristics associated with slope categories

Degree of slope (%)	Development Potential
0% - 3%	Generally suitable for all development and uses
4% - 8%	Suitable for medium density residential development, agriculture, industrial and institutional uses
9% to 15%	Suitable for moderate to low-density residential development, but great care should be exercised in the location of any commercial, industrial, or institutional uses.
16% to 25%	Only suitable for low-density residential, limited agricultural and recreational uses.
Over 25%	Only used for open space and certain recreational uses.

Source: Lehigh Valley Planning Commission, 2008.

Map 2: Elevation





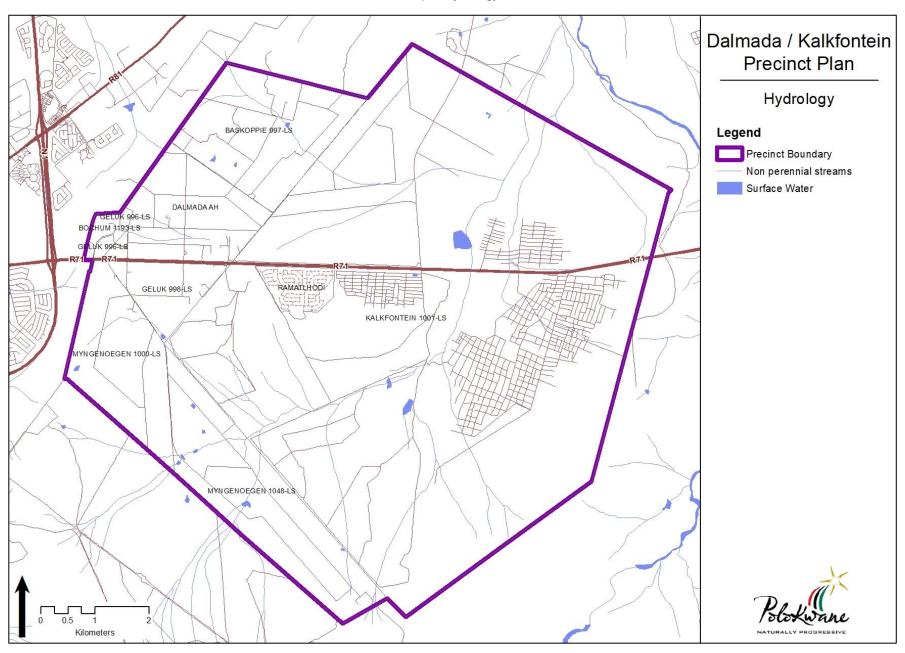
3.1.2. Hydrology

Although the study area is not impacted by any major rivers, a number of non-perennial streams (streams that cease to flow from time to time and some even dry up completely for a few days, a few months, or a few years at a stretch) can be found in the Precinct. While these streams may impact on possible development (any major development will need to take into account the streams and potential flood line implications), it enhances the natural beauty of the Precinct and presents the following opportunities and benefits:

- environmental conservation
- potential stormwater management
- · climate adaptation
- the reduction of heat stress
- increasing biodiversity
- food production
- · better air quality, and
- more anthropocentric functions, such as increased quality of life through recreation and the provision of shade and shelter in and around the Precinct.

The hydrology is reflected in Map 4.

Map 4: Hydrology



3.1.3. Environmental Considerations

Critical Biodiversity Areas (CBA) and Ecological Support Areas (ESA) are required to meet the region's biodiversity targets, it is therefore important that they are maintained in the appropriate condition for their category. The recommendation from the South African Biodiversity Institute is that these areas should be maintained in a natural or near-natural state to ensure the continued existence and functioning of species and ecosystems. In other words, if these areas are not maintained in a natural or near-natural state then biodiversity targets cannot be met. Maintaining an area in a natural or near-natural state can include a variety of biodiversity-compatible land uses and resource uses. The implications are summarised below:

Table 2: Implications of critical biodiversity areas

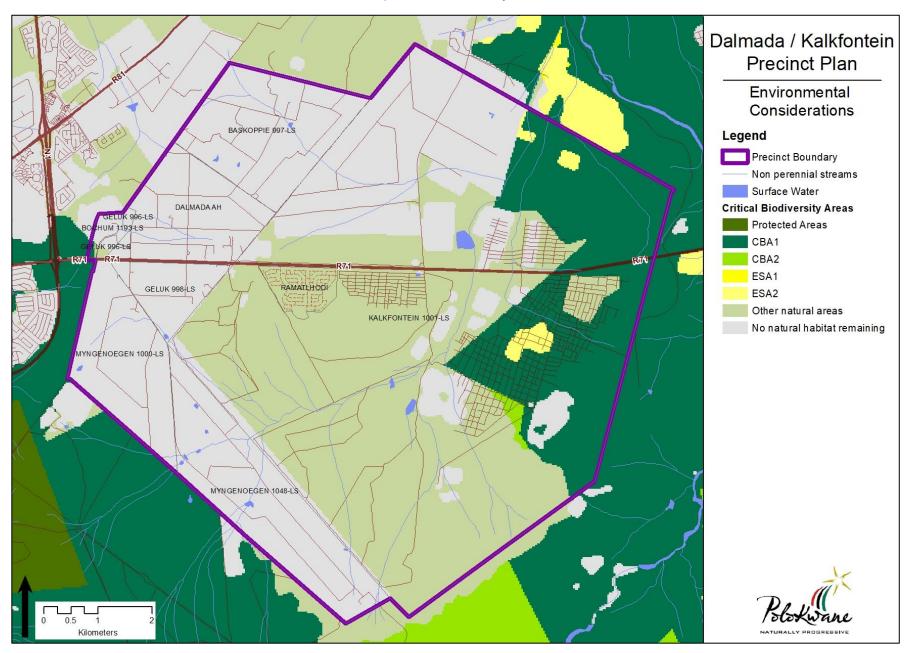
CBA Map Category	Description	Land Management Objective	Land Management Recommendations	Compatible Land- Use	Incompatible Land-Use
Critical Biodiversity Areas (1)	Irreplaceable Sites. Areas required to meet biodiversity pattern and/or ecological processes targets. No alternative sites are available to meet targets.	Maintain in a natural state with limited or no biodiversity loss. Rehabilitate degraded areas to a natural or near natural state, and manage for no further degradation.	Obtain formal conservation protection where possible. Implement appropriate zoning to avoid net loss of intact habitat or intensification of land use.	Conservation and associated activities. Extensive game farming and ecotourism operations with strict control on environmental impacts and carrying capacities, where the overall there is a net biodiversity gain. Extensive Livestock Production with strict control on environmental impacts and carrying capacities. Required support infrastructure for the above activities. Urban Open Space Systems	Urban land-uses including Residential (including golf estates, rural residential, resorts), Business, Mining & Industrial; Infrastructure (roads, power lines, pipelines). Intensive Animal Production (all types including dairy farming associated with confinement, imported foodstuffs, and improved/irrigated pastures). Arable Agriculture (forestry, dry land & irrigated cropping). Small holdings.
Critical Biodiversity Area (2)	Best Design Selected Sites. Areas selected to meet biodiversity pattern and/or ecological process targets. Alternative sites may be available to meet targets.	Maintain in a natural state with limited or no biodiversity loss. Maintain current agricultural activities. Ensure that land use is not intensified and that activities are managed to minimize impact on threatened species.	Avoid conversion of agricultural land to more intensive land uses, which may have a negative impact on threatened species or ecological processes.	Current agricultural practices including arable agriculture, intensive and extensive animal production, as well as game and ecotourism operations, so long as these are managed in a way to ensure populations of threatened species are maintained and the ecological processes which support them are not impacted. Any activities compatible with CBA1.	Urban land-uses including Residential (including golf estates, rural residential, resorts), Business, Mining & Industrial; Infrastructure (roads, power lines, pipelines). More intensive agricultural production than currently undertaken on site. Note: Certain elements of these activities could be allowed subject to detailed impact assessment to ensure that developments were designed to CBA2. Alternative areas may need to be identified to ensure the CBA network still meets the required targets.

CBA Map Category	Description	Land Management Objective	Land Management Recommendations	Compatible Land- Use	Incompatible Land-Use
Ecological Support Areas (2)	Areas with no natural habitat that is important for supporting ecological processes.	Avoid additional / new impacts on ecological processes.	Maintain current land-use. Avoid intensification of land use, which may result in additional impact on ecological processes.	Existing activities (e.g., arable agriculture) should be maintained, but where possible a transition to less intensive land uses or ecological restoration should be favored.	Any land use or activity that results in additional impacts on ecological functioning mostly associated with the intensification of land use in these areas (e.g., Change of floodplain from arable agriculture to an urban land use or from recreational fields and parks to urban).
Other Natural Areas	Natural and intact but not required to meet targets, or identified as CBA or ESA	prescribed. These are guidelines and policy before "Other natural identification of previous	eas are nevertheless si . Where possible existi areas" as before "Otheously unknown importa	er natural areas" may late	vn and regional planning uld be favored for development r be required either due to the n these sites, or alternatively
No natural habitat remaining	Areas with no significant direct biodiversity value. Not Natural or degraded natural areas that are not required as ESA, including intensive agriculture, urban, industry; and human infrastructure.				

Source: Limpopo Conservation Plan v.2 Technical Report 2013 and Limpopo Province Map of Critical Biodiversity Areas and Ecological Support Areas 2018.

The above categories are shown on Map 5.

Map 5: Critical Biodiversity Areas



3.1.4. Land and Soil Capability

 Land capability is defined as the most intensive long-term use of land for purposes of rainfed farming determined by the interaction of climate, soil and terrain¹.

The Agricultural Research Council developed a land capability classification system for South Africa in 2002 and updated the system in 2016. In terms of this classification system, most of the Precinct can be rated as moderate to high land capability (scoring 9-10 out of a possible 15).

A spatial depiction of the various land capability classes can be seen on Map 6.

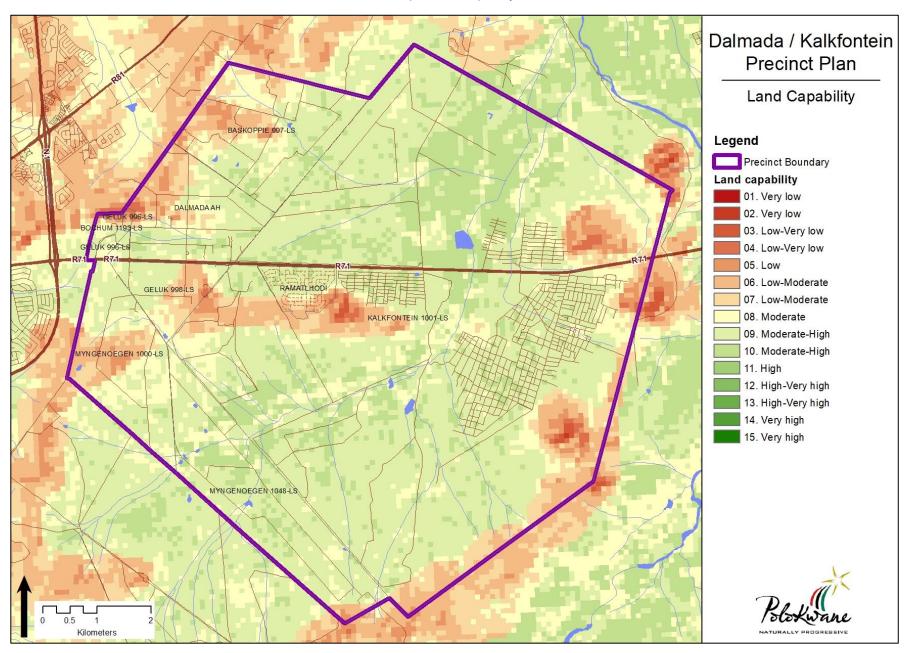
Soil Capability.

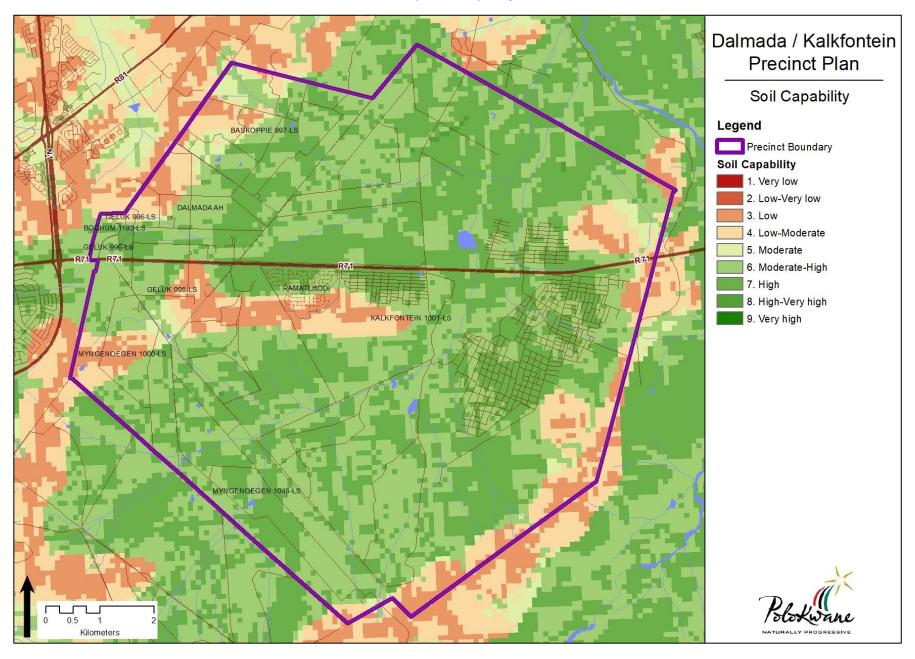
Agricultural soil suitability is calculated as a function of the potential of the soil to hold and supply moisture to the plant; the sensitivity of the soil affecting productivity and the inherent potential of the soil to be fertile. **Soil capability** takes into consideration all aspects pertaining to the characteristics of the soil and their contributions towards plant production. Most of the Precinct rates as moderate-high to high in terms of soil capability (6-7 out of a possible 9). Soil capability is depicted on Map 7.

In terms of both land and soil capability, the Precinct shows a high potential for agriculture. In fact, the soil capability class of "high" is considered some of the best soils for agriculture in the country². It is further important to note that the capability values indicate that the Precinct is suited to dry-land agriculture, meaning that agriculture can exist even without irrigation.

¹ Department of Agriculture, Forestry and Fisheries (DAFF), 2016.

² Telephone interview with Annelize Collet, Dept. of Agriculture.





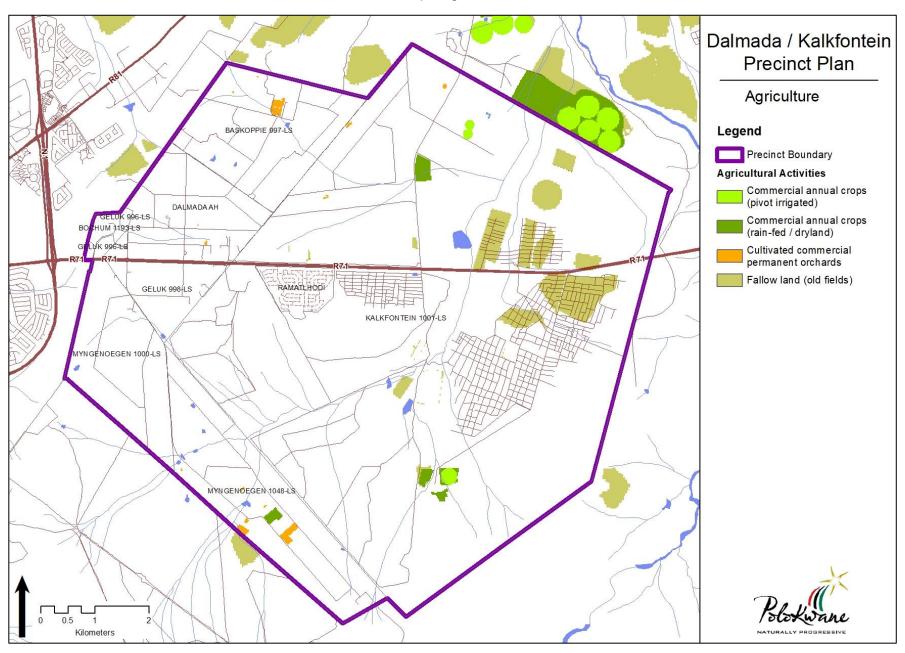
3.1.5. Agriculture

Agricultural activities in and around the Precinct can be seen on Map 8. Activities within the Precinct is limited to small sections used for commercial annual crops on the Farm Kalkfontein 1001-LS (portions 1 and 36). In addition, on the smaller farms of Baskoppie and Myngenoegen 1048 LS, cultivated commercial orchards can be found.

Although the map (derived from 2020 Land Cover) seems to indicate limited agricultural activities in the Precinct, some idea of the importance of the agricultural sector in this area can be found in various statements from the City of Polokwane Agricultural Development Strategy (2019-2025). These are listed below:

- Agricultural activity is concentrated around Dalmada, Kalkfontein areas. Vegetable farming activity alongside broiler & eggs production and livestock farming dominates the cluster.
- Smallholder farmers within this cluster enjoy route-to-market advantages. Due to its
 proximity to the City of Polokwane, itself a popular fruit and vegetable market hub,
 famers within the cluster enjoy better route-to-market advantages.
- Dalmada (a well-known urban agriculture belt on the periphery of the City of Polokwane).
- Plot holders within Dalmada's farming belt are rezoning their once booming farming
 plots into lodges and bed and breakfast ventures. With proper planning and ring-fenced
 funding, the Dalmada belt can be turned into the City of Polokwane's acclaimed ecotourism hub.
- The belt is known for its small scale but high-value game farming projects.
- The Dalmada area can be turned into a fully-fledged urban agriculture hub. Untapped urban agricultural opportunities can be unlocked in small-to medium sized plots along major development corridors and functional development areas (FDAs).

Map 8: Agriculture



3.2. Ownership

Ownership by category is depicted spatially on Map 9. A summary of area and number of land parcels by ownership category is provided in the table below. **59.32%** of land in the Precinct is privately owned (individuals, private companies or CCs and private trusts). National Government owns **21.21%** of the land.

Table 3: Ownership by category

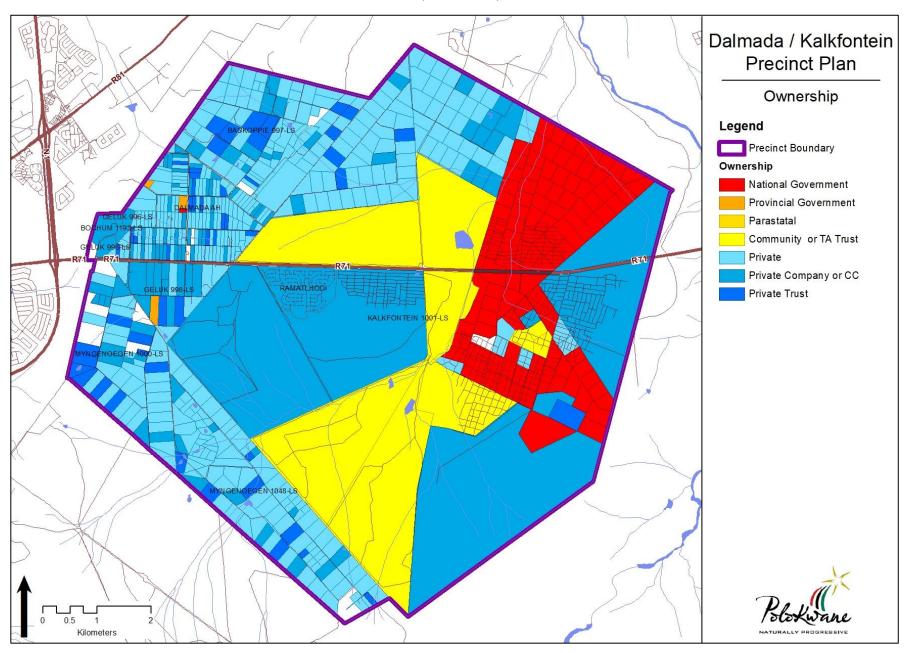
Coto	gon	Ar	ea	Land Parcels		
Cate	Hectare	%	Number	%		
	National Government	1 743	21.21%	107	22.02%	
Government	Provincial Government	8	0.10%	1	0.21%	
Parastatal	Parastatal	0.05	0.00%	1	0.21%	
Community or TA Trust	Community or Tribal Authority Trust	1 592	19.38%	10	2.06%	
	Private	1 865	22.70%	267	54.94%	
Private	Private Company or CC	2 694	32.79%	65	13.37%	
	Private Trust	314	3.83%	35	7.20%	
Total		8 215	100.00%	486	100.00%	

19.38% of land is owned by Community or Traditional Authority Trusts:

Table 4: Ownership by Community or Traditional Authority Trusts

Farm	Parcel No	PTN	Owner Name
KALKFONTEIN 1001-LS	1001	1	MABOI 6 COMMUNITY TRUST
KALKFONTEIN 1001-LS	1001	42	MABOI 6 COMMUNITY TRUST
KALKFONTEIN 1001-LS	1001	5	MABOI 6 COMMUNITY TRUST
KALKFONTEIN 1001-LS	1001	39	MABOI 6 COMMUNITY TRUST
KALKFONTEIN 1001-LS	1001	37	MABOI 6 COMMUNITY TRUST
KALKFONTEIN 1001-LS	1001	55	MABOI 6 COMMUNITY TRUST
KALKFONTEIN 1001-LS	1001	146	MAMAHULE TRADITIONAL AUTHORITY TRUST
KALKFONTEIN 1001-LS	1001	147	MAMAHULE TRADITIONAL AUTHORITY TRUST
KALKFONTEIN 1001-LS	1001	153	MAMAHULE TRADITIONAL AUTHORITY TRUST

Map 9: Ownership



3.3. Land Claims

An enquiry lodged with the Office of the Regional Land Claims Commissioner (19 May 2022) resulted in a confirmation that there are land claims lodged prior to 1998 on the farm Kalkfontein 1001 LS.

Table 5: Land Claims in the Dalmada/Kalkfontein Precinct

Property/Farm Name	Claimant (s)	KRP (s)	Claim Status
	Mamahule Community	1982/9268	Research
Kalkfontein 1001 LS	Mothapo Tribe	1754	Report
	The Mothiba Tribe	2481	Approved

The claims process is composed of the following six phases³

- Phase 1. Lodgement and registration. This phase considers claims lodged by 31 December 1998 wherein an acknowledgement is issued. The act stipulates that: Any person who or the representative of any community that is entitled to claim restitution of a right in land, may lodge such claim that shall include a description of the land in question, the nature of right in the land of that he /she or such community was disposed and the nature of the right or equitable redress being claimed, on the form prescribed for this purpose by the Chief of Land Claims Commissioner.
- Phase 2. Screening and categorisation. Compliance with the Act is checked and establishes missing information. It is during this phase that field research is conducted.
- Phase 3. Determination of qualification. Claim is accepted or found not to qualify publication in the Government Gazette and relevant newspapers. Claimant and other parties are informed accordingly.
- Phase 4. Negotiations. A report is produced after the completion of investigation.
 Various options are presented to help claimants to make an informed choice.
- Phase 5. Settlement. During this phase, agreements are signed in terms of Section 42
 D Ministerial approval, or a decision made by the Land Claims Court (LCC) in the form of court order.
- Phase 6. Implementation of settlement. This phase includes detailed land planning, transfer of land, development funds, grants, post award support and handover financial compensation, or other redress.

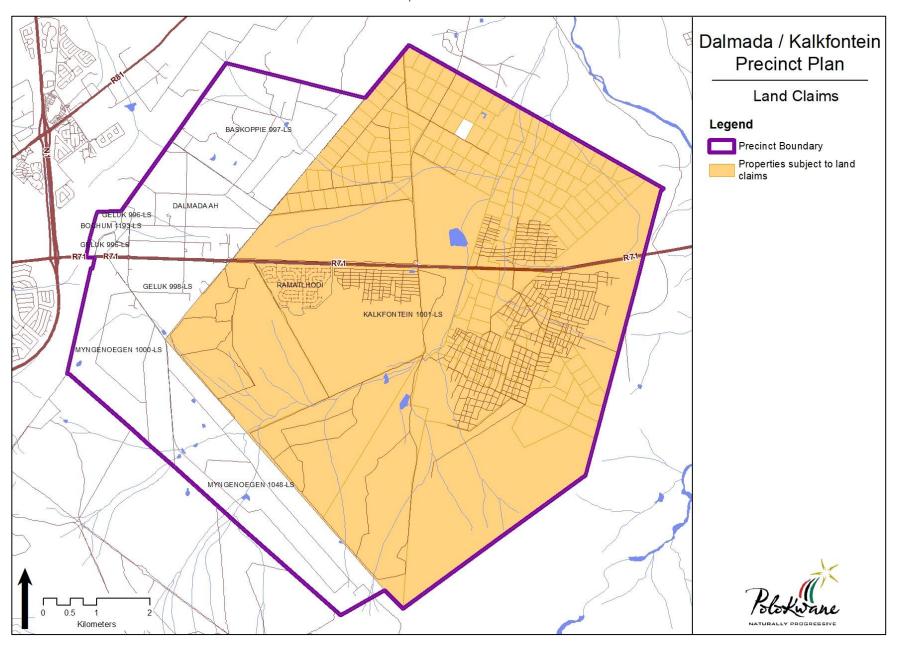
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³ Commission on Restitution of Land Rights, 2007:8

Note that the properties in question must not be disposed of, sold or leased without the express permission from the Office of the Regional Land Claims Commissioner.

The Government Gazette No. 32707 (13 November 2009) lists the properties subject to the land claim. These are shown in the following map:

Map 10: Land Claims



3.4. Demographics

3.4.1. Population and Households

The most recent population count at a disaggregated level is the 2011 National Census. In 2011, **4 029** people resided in the Precinct. The corresponding number of households at that time was **1 118**, with an average household size of **3.6** people per households.

Table 6: 2011 Population Figures

Place	Population 2011	Households 2011	Ave. HH Size
Baskoppie	199	35	5.7
Dalmada AH	1 527	468	3.3
Geluk	299	99	3.0
Kalkfontein	273	91	3.0
Myngenoegen	1 608	390	4.1
Bochum	123	35	3.5
Total	4 029	1 118	3.6

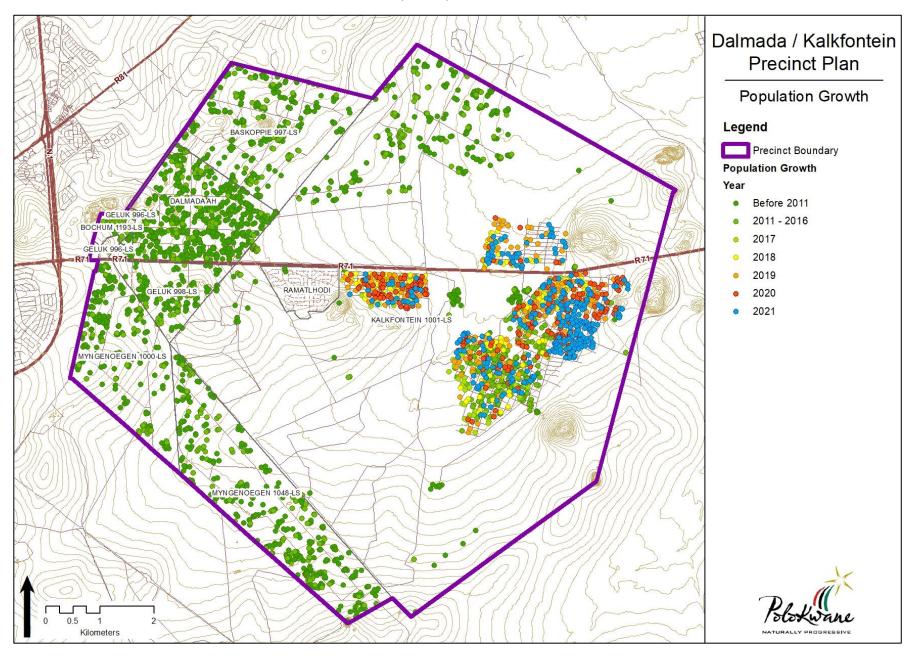
Source: 2011 Census, StatsSA.

In order to arrive at a more recent population figure, use was made of Google Imagery. Historical images were also used to indicate when households located in the area. Map 11 indicates that population in the Precinct was relatively stable until 2016. A number of new residents entered the area from 2017, settling on the portions of Kalkfontein 1001-LS owned by the MABOI 6 COMMUNITY TRUST (Ptn 55) and those portions owned by the State. 2018 saw further expansion, however, this took place on land parcels that are privately owned (ptns 41 and 2. Map 12 illustrates the expansion spatially. Table 7 shows that the population in the Precinct increased to 10 221. Dalmada appears the most stable, showing a yearly increase of only 1.7%. Kalkfontein experience massive growth of more than 155.9% per annum.

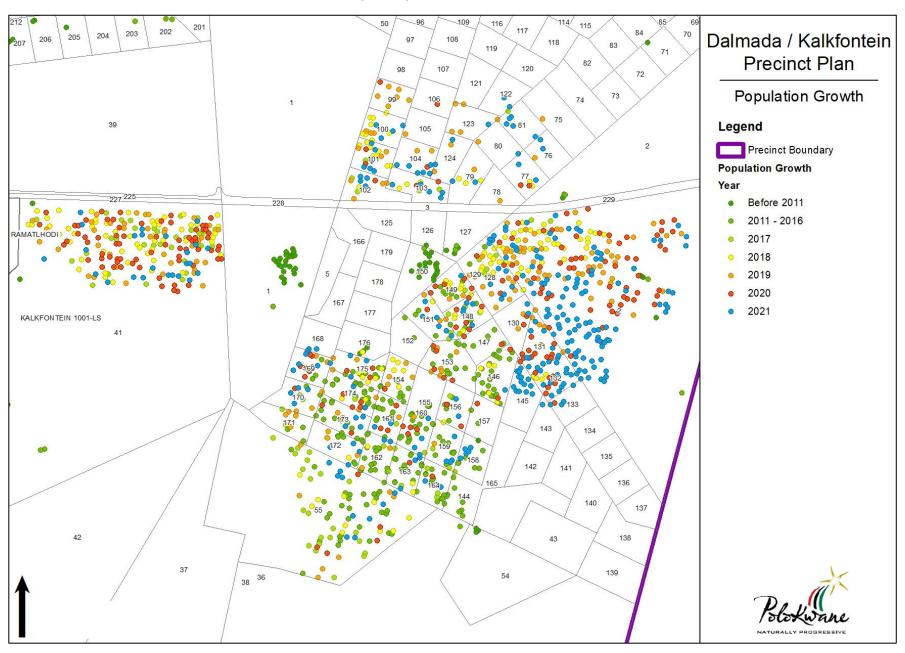
Table 7: Population Growth 2011-2021

Place	Population 2011	Households 2011	Ave. HH Size	Population 2021	HH 2021	% Annual Growth (2011-2021)
Baskoppie	199	35	5.7	426	75	11.4%
Dalmada AH	1 527	468	3.3	1 791	549	1.7%
Geluk	299	99	3.0	393	130	3.1%
Kalkfontein	273	91	3.0	4 530	1 510	155.9%
Myngenoegen	1 608	390	4.1	2 210	536	3.7%
Bochum	123	35	3.5	126	36	0.2%
Total	4 029	1 118	3.6	10 221	2836	15.4%

Map 11: Population Growth



Map 12: Population Growth - Kalkfontein



3.4.2. Gender

For each of the separate suburbs/farms in the Precinct, there seems to be marginally more males than females. Dalmada AH exhibits the smallest difference (52% males vs. 48% females). The higher male population in the rest of the areas could perhaps be ascribed to farm labour associated with agricultural activities in the region.

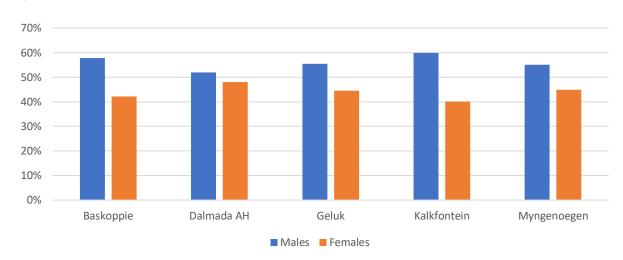


Figure 1: Gender Distribution

Source: Source: 2011 Census, StatsSA.

3.4.3. Age Distribution

Most people in the Precinct are older than 18 (75%). 17% of people are of school going age.

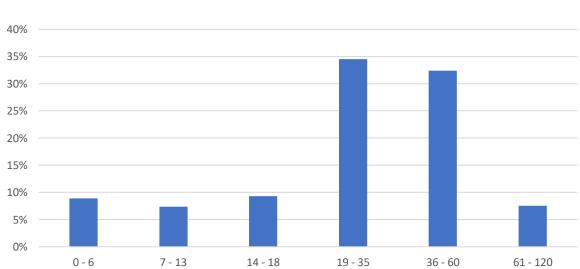
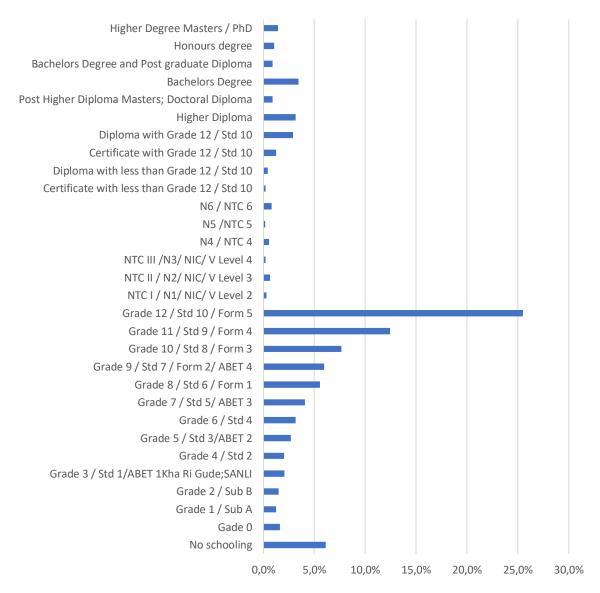


Figure 2: Age distribution

3.4.4. Highest Level of Education

26% of residents in the Precinct have matric as their highest level of education. 18.4% have achieved a level of education higher than matric.

Figure 3: Level of education

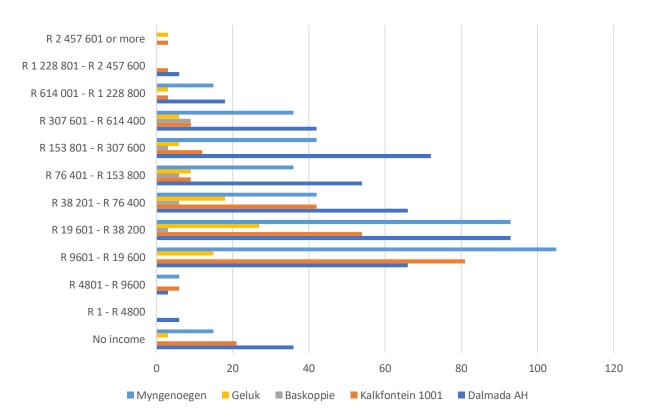


Source: 2011 National Census

3.4.5. Household Income

The figure below illustrates the annual household income in the Precinct (at 2011 levels)

Figure 4: Annual Household Income



Source: 2011 National Census

Figure 5: Average Household Income (2021 levels)

Place	Ave Annual HH Income	Ave. Monthly HH Income		
Dalmada AH	R351 344	R29 279		
Kalkfontein	R193 590	R16 133		
Baskoppie	R360 533	R30 044		
Geluk	R415 127	R34 594		
Myngenoegen	R328 917	R27 410		
Total	R317 440	R26 453		

Source: 2011 National Census

Geluk is the most affluent part of the Precinct, with an income of almost R35 000 per household per month. Kalkfontein the poorest area, where households earn around R16 000 per month in 2021.

3.4.6. Employment

The Precinct is doing relatively well with regards to unemployment. 4.72% of people (of working age) are unemployed, with Kalkfontein showing the highest level of unemployment at 13.72%. A large number of people are not economically active (21.12% across the Precinct).

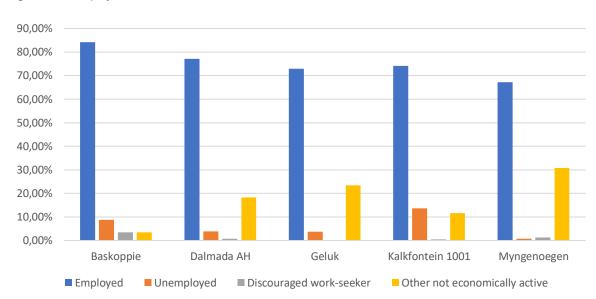


Figure 6: Unemployment

Source: 2011 National Census

The majority (56.1%) of employed people work in the formal sector. Only 12.5% works in the informal sector, with 28.6% of employed by private households.

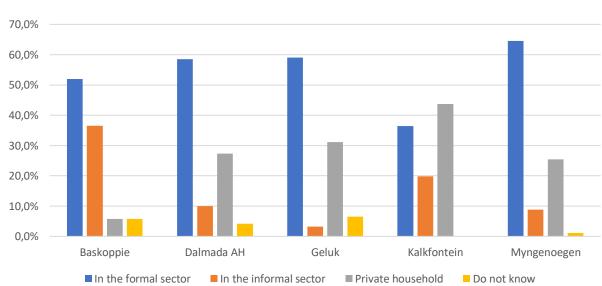


Figure 7: Economic Sector

Source: 2011 National Census

3.5. Services

3.5.1. Piped Water

Most households in the study area have access to Piped water inside their dwellings or at least inside the yard.

Table 8: Access to water

Place	Dalmada AH	Kalkfontein	Baskoppie	Geluk	Myngenoegen	Total Precinct
Piped (tap) water inside dwelling/institution	62%	68%	82%	97%	48%	62%
Piped (tap) water inside yard	37%	17%	18%	3%	51%	34%
Piped (tap) water on community stand: distance less than 200m from dwelling/institution	0%	5%	0%	0%	0%	1%
Piped (tap) water on community stand: distance between 200m and 500m from dwelling/institution	0%	2%	0%	0%	0%	0%
Piped (tap) water on community stand: distance between 500m and 1000m (1km) from dwelling /institution	0%	2%	0%	0%	0%	0%
Piped (tap) water on community stand: distance greater than 1000m (1km) from dwelling/institution	0%	0%	0%	0%	0%	0%
No access to piped (tap) water	1%	6%	0%	0%	1%	2%
Total	100%	100%	100%	100%	100%	100%

Source: 2011 National Census

3.5.2. Sanitation

The predominant level of service in the Precinct is flush toilets (either connected to a sewerage system or septic tank). Kalkfontein lags somewhat behind with half the residents having access to pit latrines as their highest level of service.

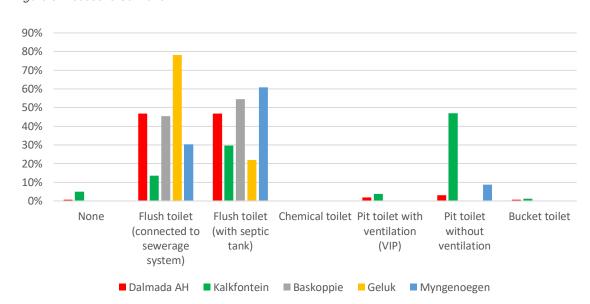


Figure 8: Access to Sanitation

Source: 2011 National Census

3.5.3. Electricity

With the exception of Kalkfontein, most Households in the Precinct have access to electricity. While 70% of households in Kalkfontein have access to electricity, the remaining 30% use alternative sources of energy.

3.5.4. Refuse Removal

The municipality does not remove refuse in the study area. Most areas have their own communal refuse dump. Residents of the Dalmada area pay to have private contractors remove refuse.

3.5.5. Roads

Of the 275km of roads in the Precinct, only 34km (12%) have been paved. The main entrance to the Precinct is located on the R71.

 The first entry point, travelling from Polokwane is a controlled access point (traffic lights, providing access to Corobrick (left) and access to Myngenoegen (Right) at the PEPPS College.





Source: Google Maps

 The main access point to the Precinct (both the northern and southern areas) is the traffic circle located on the R71. The access point offers dual carriageway entry to the Precinct. Note that unlike the first access point, this entrance to the Precinct is paved.

Figure 10: Main Access Point to the Precinct



Source: Google Maps

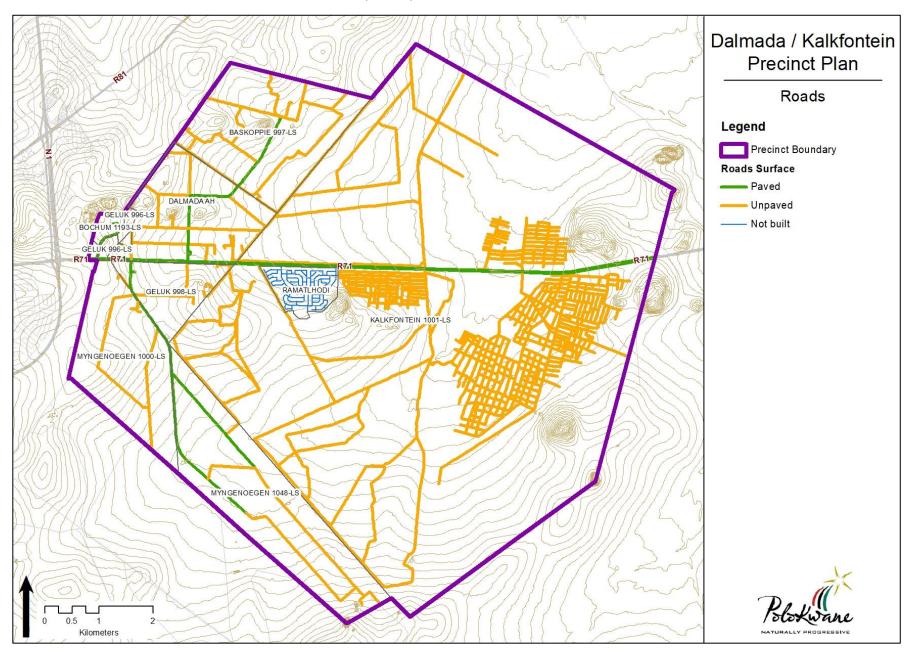
- The third access point to the Precinct (travelling from Polokwane) in controlled by a traffic light, offering access (mostly to Dalmada).
- The main access to Kalkfontein (north and south of the R71) is located approximately 5.5 km from the first traffic circle on the R71 described earlier.





Source: Google Maps

Map 13: Population Growth - Kalkfontein



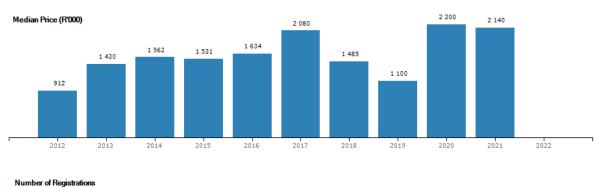
3.6. The Property Market

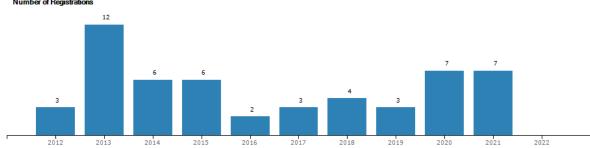
3.6.1. Price and number of registrations

The average price for a property in Dalmada AH is R 2 140 000 (Lightstone). A property search on Property24, however revealed that properties can cost in the region of R5.5 million.

The area seems quite stable with limited new registrations per annum (7 each for the last two years).

Figure 12: Median Price and No of Registrations - Dalmada AH





3.7. Land Use

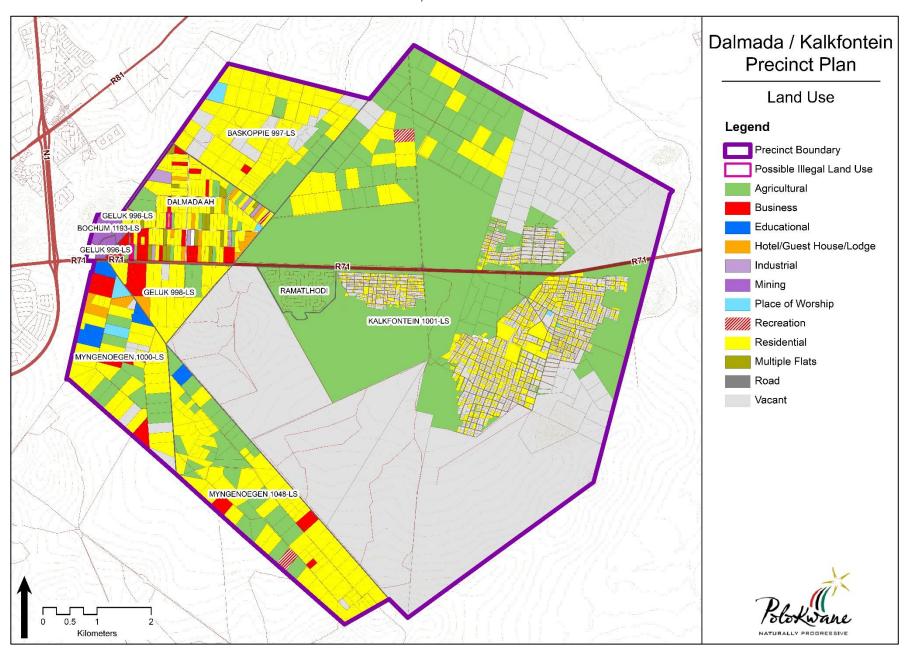
Land use is depicted on Map 14. A summary of land uses is also provided in Table 9. Each area will be discussed below:

- Dalmada AH: The area is predominantly residential (347 Ha) with some business located at the entrance to Dalmada or abutting the R71 (25 Ha). A number Guest Houses/Lodges and SPA's have opened in the Area, emphasising the importance of Tourism for Dalmada. 18 Hectares of land in Dalmada is used for Agricultural Purposes. The average land parcel size in Dalmada is approximately 2 hectares. Community participation pointed out that several illegal land uses can be found in Dalmada. There is a need for the City of Polokwane to enforce the Land Use Scheme.
- Geluk 996-LS & Bochum 1193-LS. The area is almost entirely taken up by Corobrick.
- Geluk 998-LS: With an average stand size of 5.21 Hectares, the predominant land use is residential (115 Ha). The Airsoft Club and Oasis Lodge takes up approximately 24 Ha. In addition, the Gateway Lodge takes up 7.3 Ha.
- Myngenoegen 1000-LS. The average land parcel size is 7.4 hectares, typical of small farms located on the periphery of the town. Most of the area is used for residential purposes (rural living) 202.6 hectares. The larger parcels in the area lends itself to agriculture, with a number of farm portions indicating this land use (85 hectares). Close to the entrance to Myngenoegen there are also a number of businesses, Guest Houses and Lodges as well as 4 schools.
- Myngenoegen 1048-LS: The average size of a plot in this area of Myngenoegen is 5.83
 Hectare. The area is mainly used for residential purposes (409 Hectare), with
 Agriculture the second largest land use (193 Ha).
- Baskoppie. Mainly a mixture between small scale agriculture and residential. There are
 14 vacant farm portions in Baskoppie, totalling 80 Hectare. The average size of a land
 parcel in Baskoppie is 6.11 Hectare.
- Kalkfontein. The larger farm portions on both sides of the R71 are used for agriculture. The farm portions to the east of Myngenoegen are mostly vacant. The new residential area which appeared post 2017 is shown on Land Use Kalkfontein. A total number of 3 024 (which could be observed using satellite imagery) stands have been demarcated in the area. Of these, 1 091 are occupied by houses, two churches, with the rest (1 933) vacant. Total vacant land (not within the settlement) equals 3477 Hectares.

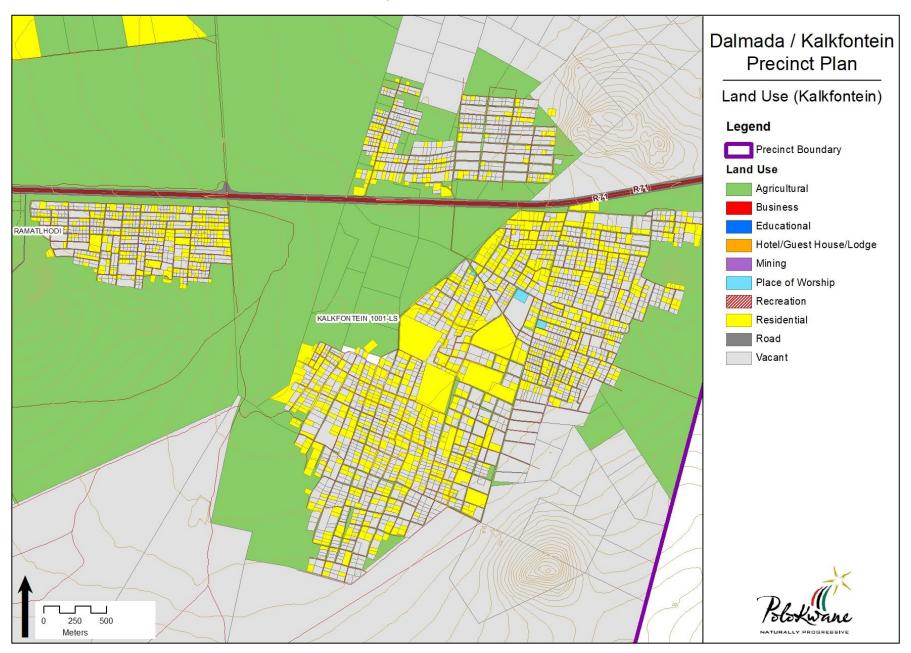
Table 9: Land use summary

					GEOGRA	PHIC AREA				
FARM/AH	GELUK 996-LS	BASKOPPIE 997-LS	GELUK 998-LS	MYNGE- NOEGEN 1000-LS	KALK- FONTEIN 1001-LS	KALK- FONTEIN 1001-LS (settlement)	MYNGE- NOEGEN 1048-LS	BOCHUM 1193-LS	DALMADA AH	TOTAL
Agricultural	0.0	90.4	19.6	85.4	2 112.0	0.0	193.5	0.0	17.9	2 518.8
Business	0.0	2.1	24.3	44.4	0.0	0.0	19.5	0.0	25.5	115.8
Educational	0.0	0.0	0.0	34.5	0.0	0.0	8.0	0.0	0.0	42.5
Hotel/Guest House/Lodge	0.0	0.0	7.3	18.4	0.0	0.0	0.0	0.0	19.3	44.9
Mining	10.0	0.0	0.0	0.0	0.0	0.0	0.0	27.3	0.0	37.2
Place of Worship	0.0	11.2	0.0	16.9	0.0	1.8	0.0	0.0	1.3	31.3
Recreation	0.0	0.0	0.0	0.0	8.5	0.0	8.4	0.0	3.9	20.8
Residential	6.5	359.2	115.3	202.6	244.7	224.0	409.4	0.0	347.8	1 909.4
Road	1.2	0.0	1.1	0.4	47.4	0.0	0.0	0.0	0.0	50.1
Vacant	0.0	80.7	4.2	34.1	3 477.2	372.2	2.3	0.0	0.0	3 970.7
Total Area	17.6	543.7	171.8	436.6	0.0	0.0	641.1	27.3	415.7	2 253.8
Average Parcel Size	5.88	6.11	5.21	7.40	26.41	0.16	5.83	27.26	2.08	86.35

Map 14: Land Use



Map 15: Land Use - Kalkfontein



3.8. Summary of key issues affecting the Precinct

Biophysical

- The Precinct is generally flat, with some koppies. While there are no major rivers in the area there are several non-perennial streams. These present opportunities such as:
 - environmental conservation
 - o potential stormwater management
 - o climate adaptation
 - the reduction of heat stress
 - increasing biodiversity
 - food production
 - o better air quality, and
 - more anthropocentric functions, such as increased quality of life through recreation and the provision of shade and shelter in and around the Precinct
- Critical biodiversity areas and Ecological Support Areas can be found to the west of the Precinct, which should be protected and not used for residential development. The recent development in Kalkfontein, however, have already consumed much of the CBA's.

Agricultural Potential and Opportunities

- Agriculture plays an important role in the Precinct, with strategy documents of the Municipality highlighting both agriculture (fully-fledged urban agriculture hub) as well as tourism (acclaimed eco-tourism hub).
- Land Capability and soil capability (in addition to discussions held with Dept. of Agriculture,
 Land Reform and Rural Development indicates that the Precinct is well suited to
 Agriculture. The soil capability specifically shows that the Precinct have some of the best
 suited soils for Dryland Agriculture in the Country.
- While there are some agricultural activities in the area, most opportunities remain unexploited, which could be rectified through proposals in this document.

Ownership, Land Claims, and recent development in the area

- While most of the land is privately owned, government and traditional authorities are also major landowners.
- The entire farm Kalkfontein 1001-LS is subject to land claims. The status of the claim is currently "Research Report Approved", with the Office of the Regional Land Claims Commissioner stating that "properties in question must not be disposed of, sold or leased without the express permission from the Office of the Regional Land Claims Commissioner". The impact of the land claims are as follows:
 - It could take several years to conclude the land claim, which could mean that the proposals put forth in the Precinct Plan could be delayed.
 - There is a current court case regarding land invasion as well as ownership in the Kalkfontein 1001-LS area, which could further either delay or impact on the development in the Precinct.
- Recent unplanned development has seen the population increase massively in around Kalkfontein. This has spilled over to privately owned land and has led to conflict in the area.
- Portion 41 of Kalkfontein is Privately owned, a development proposal for a mixed use township has been submitted to the municipality.
- The recent influx of people could potentially change the nature of the Precinct, and if not adequately planned for - could create a large "unplanned" human settlement on the edge of the City (155% growth).

Engineering Services and Community Facilities

- Most of the data related to level of services are old and describes a predominantly rural setting on the edge of the City characterised by levels of services associated with agricultural holdings and farms.
- The data in general does not describe the more recent development in Kalkfontein.
- There could be insufficient bulk services available to serve a large community.
- There is a general lack of community facilities in the Precinct. Those that are located within the Precinct historically served a much smaller population than what can currently be found.

Land use

- There are several business sites close to the entrance to Dalmada & Geluk AH.
- There are several Illegal businesses in the Precinct (especially bordering on the R71). These businesses will have to regularise their land use through development applications. Whilst illegal in nature, the location choice of these business further highlights the importance of the R71 as an activity corridor and gateway to the City. Residents of Dalmada further indicated that several illegal land uses can be found in the area. There is a need for the City of Polokwane to enforce the Land Use Scheme in this Precinct.
- The few community facilities present in the area (schools) are clustered at the entrance to the Precinct. There are not enough community facilities to support the number of people within the Precinct.
- There are virtually no community facilities in the Kalkfontein area, though this is already
 the largest (albeit the most recent) community (4500 people, more than twice the
 number of people compared to Dalmada).
- Although micro agriculture on the small holdings and farm portions are important, some
 of these small holdings are being converted into Lodges or Accommodation facilities
 (www.lekkerslaap.co.za lists 8 establishments in Dalmada alone), emphasising the
 importance of the tourism sector in the Precinct.

4. Spatial Proposals

4.1. Vision for the Dalmada/Kalkfontein Precinct

While the key theme for City of Polokwane is "becoming a Smart City", the IDP expresses the vision statement as:

"The ultimate in innovation and sustainable development".

The Vision statement is supported by the following mission:

"Provide cost effective services which promote sustainable livelihood through socio economic development and good governance"

Key elements from the Municipal Vision include:

- Emphasis on quality of life in terms and sustainable livelihoods.
- Sustainable quality of services for all in the municipality, which obvious includes those living in Dalmada/Kalkfontein Precinct.
- An emphasis on smart development, which includes the elements of smart economy, smart environment, smart governance, smart living, smart mobility and smart people.

The proposed spatial vision for the Precinct reads as follows:

A Precinct which strives to protect of natural environment, encourage agricultural activities and develop sustainable human settlement with quality services for residents

4.2. Spatial Principles/Objectives Emanating from the Precinct Vision

The vision statement from the previous section needs to be supported by spatial principles or objectives to ensure the vision is achieved. The following objective shave been identified in support of the Vision:

• Objective 1: Protect the natural environment.

This principle is focussed on protecting the Critical Biodiversity areas and Ecological Support Areas present within the Precinct. These areas are already under threat from urban expansion. Another key thrust of this principle is the establishment of Blue/Green Corridors. Green infrastructure or blue-green infrastructure refers to a network that

provides the "ingredients" for solving urban and climatic challenges by building with nature. The main components of this approach include stormwater management, climate adaptation, the reduction of heat stress, increasing biodiversity, food production, better air quality, sustainable energy production, clean water, and healthy soils, as well as more anthropocentric functions, such as increased quality of life through recreation and the provision of shade and shelter in and around towns and cities⁴. Green infrastructure also serves to provide an ecological framework for social, economic, and environmental health of the surroundings.

 Objective 2: Leverage the importance of the R71 as Eastern Gateway to Polokwane and important Activity Corridor.

The R71 acts as the entry point to Polokwane from the East. The current land uses adjacent to the R71 highlights the importance of this road to business in terms of enhanced visibility as well as access to Polokwane. These opportunities should be exploited.

 Objective 3: Provision of a mixture of human settlements for the Precinct taking into account population growth.

While still a per-urban area (characterised by small holdings, small farms and agricultural activities), recent years have seen human settlements added to the Precinct. Some of these settlements have been planned (Ramathlodi Park), but a significant part of Kalkfontein is unplanned and the result of sites allocated by the traditional community.

- Objective 4: Expand on the Agricultural Opportunities offered by the Dalmada farming belt.
 The analysis indicated that the Precinct contains extremely good soils which should be
 exploited to enhance agricultural activities in the Precinct. Agro processing should also be
 considered as a means to enhance the livelihoods of residents of the Precinct and provide
 more job opportunities.
- Objective 5: Exploit the Tourism Opportunities offered in the Precinct.

There are currently a number of establishments offering accommodation to tourists in the area. These facilities should be supported by growing the tourism sector within the Precinct. Emphasis should be places on creating active tourism (e.g., hiking, trail running, mountain biking etc.) making use of the blue green corridors mentioned in objective 1. Further tourism opportunities could also be linked to the agricultural sector trough agro tourism.

-

⁴ "Sustainable trade infrastructure in Africa: A key element for growth and prosperity?". International Centre for Trade and Sustainable Development.

 Objective 6: Adequate Provision of Community Facilities in support of Sustainable Human Settlements.

There is a general lack of community facilities in the area. Quality community facilities should be provided to support the growing population in Dalmada/Kalkfontein.

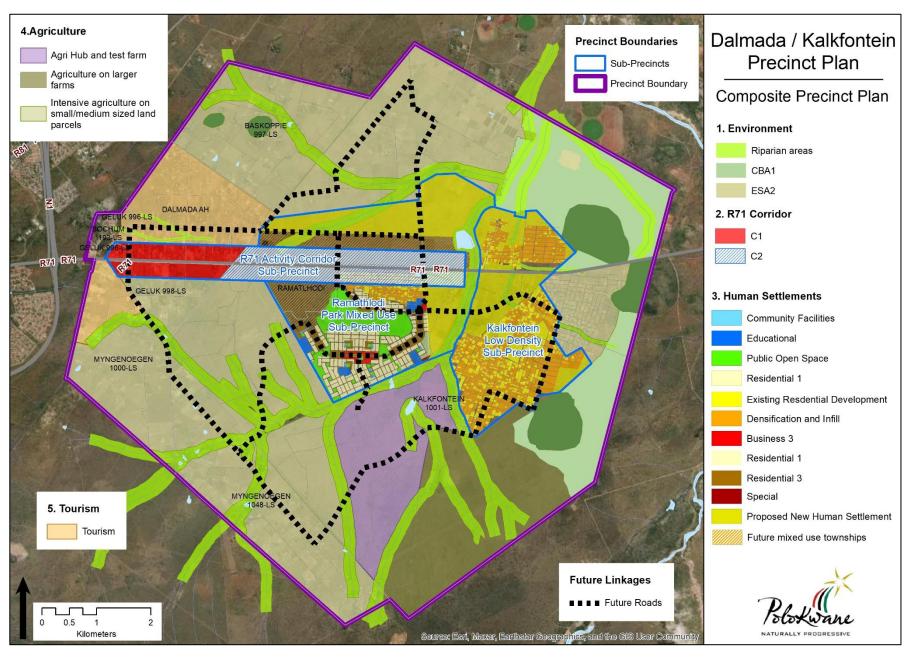
 Objective 7: Adequate Provision of Engineering Infrastructure in support of Sustainable Human Settlements.

Engineering services (water, sanitation, electricity and refuse removal) should be provided at a high quality to accommodate the growing needs of the Precinct. The Precinct Plan will quantify the requirement for these services, which should be addressed by the Technical Services Departments of the City of Polokwane.

A composite Precinct Plan is shown in Map 16 indicating how the different spatial objectives work together to propose a future for the Precinct That aligns with the Vision for the Dalmada/Kalkfontein Precinct. Note also the proposed future linkages. These linkages, which follows existing roads in the Precinct (formal or informal) should be kept in mind during the formalisation of different areas in the Precinct to ensure that the precinct remains accessible in its totality in future.

Each element of the precinct (in line with the objectives) will be discussed separately in following sections of this document.

Map 16: Composite Precinct Plan with Future Linkages



4.3. Objective 1: Protect the natural environment

From the status quo analysis, a number of environmental factors impact on the Precinct. These are topography (to a limited extent), hydrology, and areas of environmental significance or importance. In some instances, these are often referred to as "constraints" to development which implies that these factors place a limitation on development. The approach followed in this Precinct Plan is that these factors should rather be seen as an opportunity.

The establishment of blue-green corridors utilises areas otherwise considered as constraints to development in order to achieve environmental targets as well as contribute to a liveable Precinct.

The following elements are considered in for this development principle:

Protection of Critical Biodiversity Areas and Ecological Support Areas.

Earlier sections of this report indicates that Critical Biodiversity Areas (1) and Ecological Supports areas (2) are present in the eastern section of the Precinct. Those areas to the South of the R71 has already been compromised by the rapid expansion of the Kalkfontein land allocation in recent years. Note that while these areas cannot be recovered, it is important to protect those that remain. The recommendations for the remaining important environmental areas (in line with the recommendations from the South African Biodiversity Institute) are as follows:

- Critical Biodiversity Areas (1). These are considered to be irreplaceable Sites required to meet biodiversity pattern and/or ecological processes targets. As far as possible, these areas should be maintained in a natural state with limited or no biodiversity loss. Compatible land uses should include Urban Open Space systems.
- Ecological Support Areas (2). Areas with no natural habitat that is important for supporting ecological processes. Existing activities (e.g., arable agriculture) should be maintained, but where possible a transition to less intensive land uses or ecological restoration should be favoured.

Protection of Riparian Areas.

These areas are not currently taken up in general plans, nor are they protected in terms of zoning. These areas include the riparian areas occurring along the non-perennial streams in the Precinct. The recommendation is that development be kept away a 100m from the streams in undeveloped areas and 32m away from the developed areas. These areas could be used as active open space by the residents of the

Precinct. Landowners adjacent to the riparian areas could consider land uses catering for future tourism activities such as coffee shops. Note however, that the footprint of any future development should be such that it adds to the main function of the riparian areas, which is to conserve nature and promote active use of the open space network.

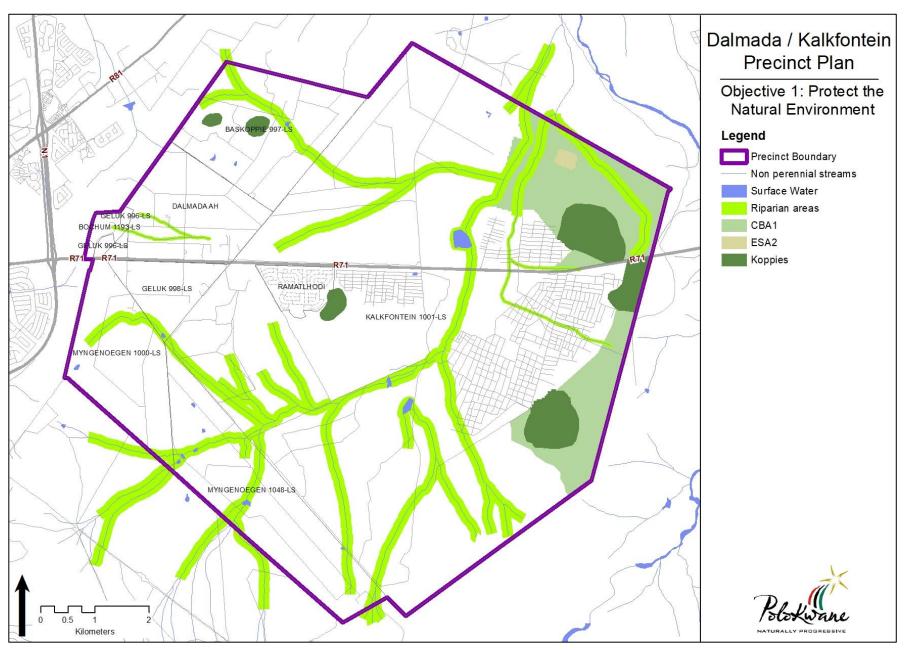
Protection of koppies and areas of steep slopes.

Several koppies can be found in the Precinct. By its nature, the steep slopes make development expensive and developed, but a concerted effort should be made to keep these in a natural state. The elevated nature of the koppies provides views and adds to the natural beauty of the area

Recommendations for implementing this objective:

- Initial meeting with DEA with specific aim to present the concept of an Integrated Blue-Green Corridor System.
- Elicit input from DEA, including Working for Ecosystems and Working for Water Programs to identify the steps required to establish the corridor as well as get people involved through EPWP program.
- Follow up workshop with DEA, Local Business and Mining Sectors to present the idea and elicit input.

Map 17: Objective 1 - Protect the Natural Environment



4.4. Objective 2: Leverage the importance of the R71 as Eastern Gateway to Polokwane and important Activity Corridor

The R71 provides the major access point to Polokwane from the east of the Precinct. The road provides high visibility as well as fast access to the City. In addition, the Precinct's proximity to the City of Polokwane with various market forces makes it an ideal location to intensify business and commercial land uses along the R71.

4.4.1. Development of the R71 Activity Corridor Sub-Precinct

The development proposal for the R71 Corridor is to form a sub-precinct, the "R71 Activity Corridor". The intent of corridor zone is to permit development reliant on highway access and visibility, where uses benefit from high vehicular trip counts and cater to drivers of private vehicles by providing visible, convenient parking and a range of retail, business and commercial land uses. The intensification of economic activities will also contribute towards employment from some of the communities within the Precinct, both during construction phase as well as over the longer term. The different elements of the R71 corridor include the following:

- The existing first row of agricultural holdings (north of the R71) in Dalmada. Several of these holdings have over time changed to business activities (including several guest houses), primarily because of its visibility from the R71.
- Half of the first row of farm portions of Geluk 998-LS to the south of the R71.
- The proposed erf size for the Sub-Precinct is 2 hectares, though subdivisions to 1 hectare could also be allowed.

The corridor is divided into two parts (C1 and C2). The development intention of the Corridor is to support a mixed land use environment. Though the Precinct Plan suggests certain desirable and non-desirable land uses, the City of Polokwane still retains the right to approve or decline land uses through the development application process linked to its Land Use Scheme, subject to public participation as required.

Desirable Land Uses In the R71 Corridor

table below indicates the mixed uses which are desirable within the Corridor through the submission and approval of Land development applications recommended by Polokwane Municipality through the Pre-consultation application.

Table 10: Desirable Land Uses in the R71 Activity Corridor

C1	C2
Nursery	Nursery
Lodge	Lodge
School	School
Warehouse	Warehouse
Storage Facilities	Storage Facilities
Shops (note that no malls will be allowed)	Builders Yard
Car Dealerships	Filling station (note that this will be limited
Auction house	to one filling station on the southern side
Filling station (note that this will be limited to	of the R71)
the existing filling station)	Tourism accommodation facilities
Tourism accommodation facilities	Townhouses
Townhouses	
Church	
Gymnasiums and Health Spas	
Offices and Professional Suite	

Note:

Other land uses which are not included in the table can also be considered on special merits and supporting approvals from other SANRAL and LEDET.

Special merits mean documentary proof and submission over and above the normal studies required (e.g. retail studies, environmental impact studies, traffic impact studies, noise impact assessment, visual impact studies etc.) where the applicant should provide unique information and motivation (that makes it different from others in a way that it contemplates something special and worthy of note) in support of the proposed use, as may be required by the municipality.

Land Uses Not Desirable In the R71 Corridor

The table below indicates land uses which are not desirable within the Corridor but can be considered through the submission and approval of Land development applications supported by approvals from SANRAL and LEDET. Furthermore the applicant will be required to provide documentary proof and submission over and above the normal studies required (e.g. retail

studies, environmental impact studies, traffic impact studies, noise impact assessment, visual impact studies etc.) and unique information and motivation for the land use to be considered.

Table 11: Land Uses Not Desirable in the R71 Corridor

C1 & C2

Panel Beaters/ Spray Painters

Scrap Yards

Transport, Bussing, Trucking - Party Venues

Hostels

Dormitory Renting out of Rooms

Any business using Heavy Machinery which creates Noise Pollution

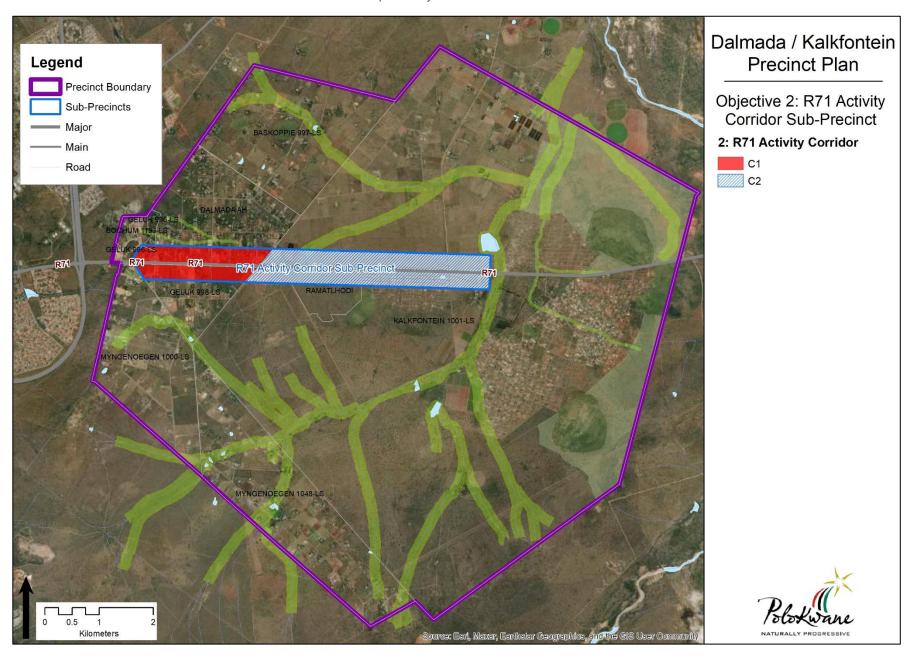
Any business which creates Pollution of Water or Air [Noxious Industries]

The corridor is indicated on the following map.

Recommendations for implementing this objective:

- Deal with illegal land uses. This should be done through a mini-land audit that compares existing land uses with the zoning as set out in the Land Use Scheme of City of Polokwane.
- Establish the R71 Activity Corridor Township.
- Market the R71 Activity Corridor to attract investors.
- Provide design guidelines along R71 Corridor through an urban design document.

Map 18: Objective 2 - R71 Corridor

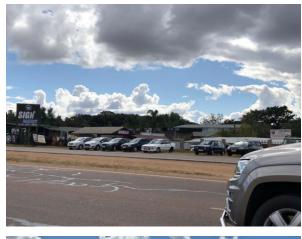


4.4.2. Current land uses within the corridor:

- Car Dealerships
- Plant hire
- Filling station
- Lodge
- Auction yard
- 4 x Brick and sand depot
- Church
- School
- Nursery

Figure 13: Land uses along the R71 Corridor















4.5. Objective 3: Provision of human settlements for the Precinct considering its peri-urban nature

4.5.1. Kalkfontein Low Density Sub-Precinct.

One of the reasons for compiling this Precinct plan is the rapid growth in the number of people taking up residence in the Precinct (especially since 2018). There are several issues impacting on the study area:

- All residential growth outside of families settling in Dalmada, Myngenoegen, Geluk and Baskoppie, is UNPLANNED growth, the result of the traditional leaders in the area demarcating sites according to traditional law. Although common practise in South Africa, there are issues associated with these types of human settlements:
 - o inadequate provision of roads (specifically a defined road hierarchy),
 - insufficient provision of land for community infrastructure such as schools, creches and parks etc.
 - stands associated with economic activity are not planned for, which can lead to incompatible land uses (e.g., taverns or liquor stores adjacent to schools).
 - lower densities than what is found in planned settlements (the average erf size in Ramathlodi is 560m², while the average erf size in the unplanned area is 1500m²).
- Some of the sites demarcated are situated on privately owned land, specifically
 portions 2 and 41 of the farm Kalkfontein 1001-LS. This has led to at least one court
 case as well as several incidents of violence as the private landowner clashed with
 occupants of the land.

Recommendations for the Kalkfontein Low Density Sub-Precinct.

- While allocation of sites through traditional law is an accepted fact in Limpopo, development this close to Polokwane Town cannot be of an "unplanned" nature.
- The recommendation therefore is that the existing development on Kalkfontein 1001-LS be subjected to an in-situ upgrading project and a General Plan be prepared for this area.
- The General plan should recognize the existing development pattern but promote a minimum stand size of 1000m² on sites not yet developed.
- The in-situ upgrading project should furthermore allow for the provision of community facilities in this Precinct.
- Note that all proposals should be discussed with SANRAL for input regarding access from the R71.

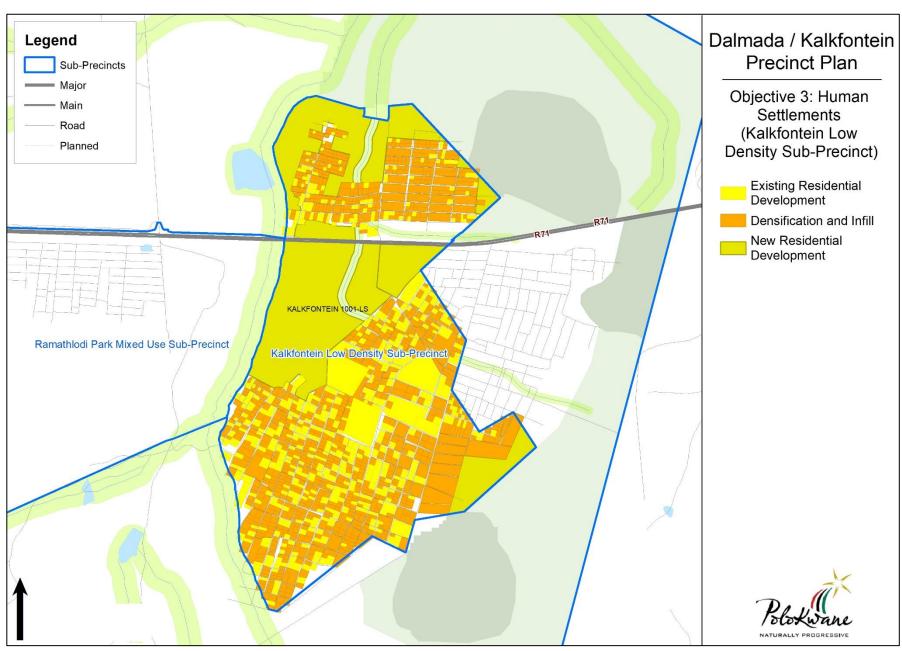
This Sub-Precinct should yield the following number of Residential 1 units:

Table 12: Kalkfontein Low Density Sub-Precinct Population and Households

Kalkfontein Low-Density Sub-Precinct	People	Households
Existing Development	3 002	834
Infill and Densification @ 1000m²/erf	12 971	3 603
New Residential Development @ 1000m²/erf	4 893	1 359
Total	20 867	5 796

The proposal for this Sub-Precinct is depicted on Map 19.

Map 19: Proposals for Kalkfontein Low Density Sub-Precinct



4.5.2. Ramathlodi Park Sub-Precinct

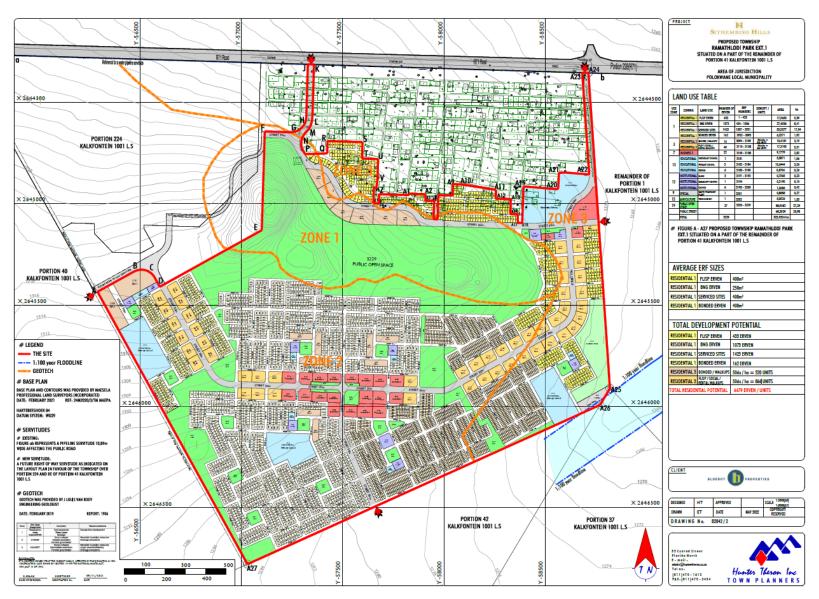
The proposals for this Sub-Precinct contain the following elements:

- The formalisation of the existing settlement to the east of Ramathlodi Park. This will
 consist of existing residential sites as well as the infill and densification of vacant sites
 at 1000m² stands.
- The development of the area to the south of the R71 and East of Ramathlodi Park as a residential township at a stand size of 600m².
- Note that all proposals should be discussed with SANRAL for input regarding access from the R71.
- An application has been submitted on portion 41 of the farm Kalkfontein 1001-LS. The proposed township (Ramathlodi park Ext. 1) is considered a mixed-use township and comprises of the following land uses:

Table 13: Land Uses in Proposed Ramathlodi Ext. 1

Zoning	Land Use	Erven	Residential Units
	FLISP Erven	433	433
Residential 1	BNG Erven	1 073	1 073
Residential	Serviced Sites	1 425	1 425
	Bonded Erven	162	162
	Bonded / Walk-ups	16	520
Residential 3	FLISP / Social / Rental Walk- ups	49	866
Business 3		22	
	Secondary School	1	
Educational	Primary School	3	
	Creche	6	
	Clinic	3	
Institutional	Community Centre	1	
	Church	6	
Special	Waste Treatment Plant	1	
Agriculture	Tree Nursery	1	
Public Open Space		27	
Public Street			
Total		3 229	4 479

Figure 14: Ramathlodi Park Ext. 1 Layout Plan



The total yield of residential units for this Sub-Precinct is indicated below:

Table 14: Ramathlodi Park Mixed Use Sub-Precinct Population and Households

Ramathlodi Park Sub-Precinct	People	Households	
Mixed use townships to the north and south of the R71	Not possible to determine at the stage		
Ramathlodi Ext. 1	6 959	1 933	
Existing Development	666	185	
Infill and Densification @ 1000m2/erf	1 065	296	
New Residential Development @ 600m2/erf	3 912	1 087	
Total	12 602	3 501	

The proposals are indicated on Map 20.

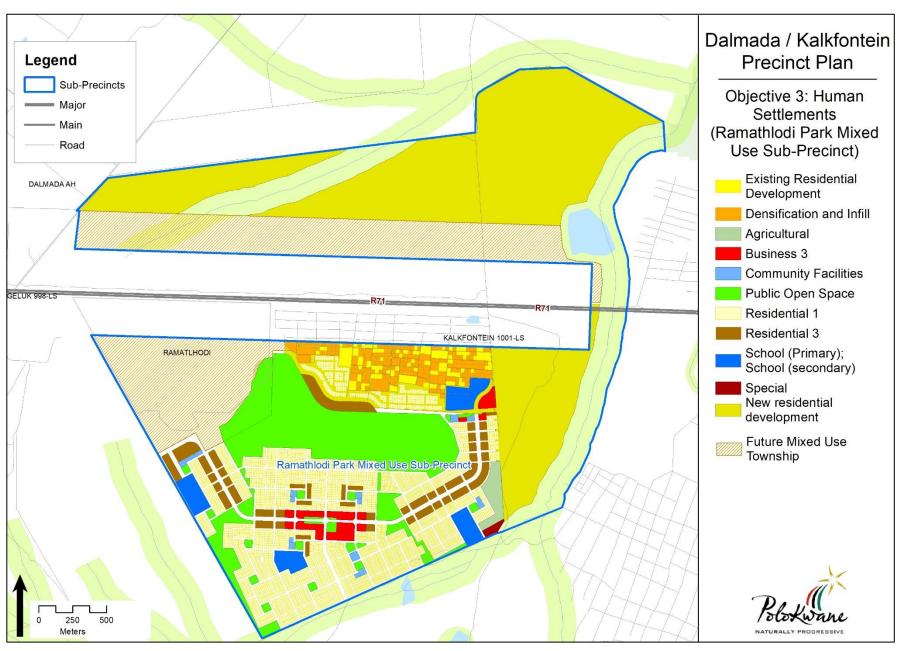
4.5.3. Other Human Settlement Proposals

- The portion of the settlement located on the Remainder of Portion 2 of Kalkfontein 1001-LS to be resettled on other areas. This area (south of the R71 to the east of the Precinct) is also privately owned, but also forms part of a critical biodiversity area.
- The development of a new residential area to the North of the R71. This area should be developed as a mixed-use township, incorporating residential development at different densities (and housing products) as well as limited business and office land uses.
- The northern parts of RE/1 and RE/39 of Kalkfontein (excluding those components highlighted above as mixed use) should be developed as a residential township at a density of 600m² erven.
- Re/41 of Kalkfontein 1001-LS, south of the R71. This area should be developed as a
 mixed-use township, incorporating residential development at different densities (and
 housing products) as well as limited business and office land uses, as well as
 supporting community facilities.
- The areas of Geluk, Dalmada, Myngenoegen and the smaller farm portions (privately owned of Kalkfontein 1001-LS to the north of the Precinct) will continue to include an element of rural residential, with a maximum of two dwelling units allowed per holding or farm portion. The current ruling land parcel size for Dalmada, Myngenoegen, Baskoppie, Geluk and the northern parts of Kalkfontein are adhered to (ranging from 2 Ha in Dalmada to 8 Ha).

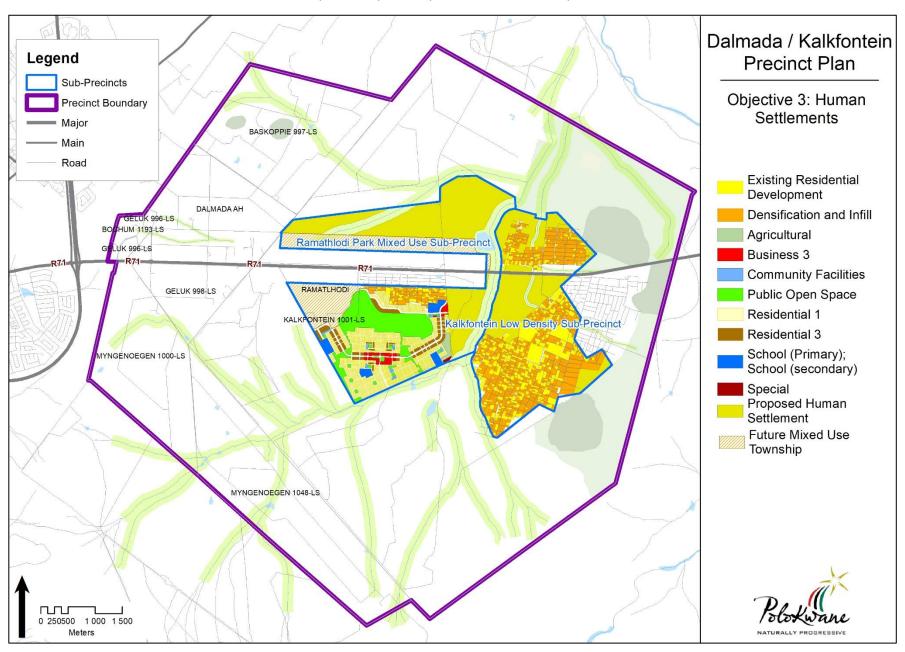
- The current ruling land parcel size for Dalmada, Myngenoegen, Baskoppie, Geluk and the northern parts of Kalkfontein should be adhered to (ranging from 2 Ha in Dalmada to 8 Ha).
- The new Agri-village areas to the east of Myngenoegen should be developed at a maximum of 5ha plots.
- Note that all proposals should be discussed with SANRAL for input regarding access from the R71.

A composite map of human settlement proposals is shown on Map 21.

Map 20: Ramathlodi Park Mixed Use Precinct Proposals



Map 21: Composite map - Human Settlement Proposals



4.6. Objective 4: Expand on the Agricultural Opportunities offered by the Dalmada farming belt

The City of Polokwane Agricultural Development Strategy (2019-2025) highlights the following important aspects related to agriculture in the Precinct:

- Agricultural activity is concentrated around Dalmada, Kalkfontein areas. Vegetable farming activity alongside broiler & eggs production and livestock farming dominates the cluster.
- Smallholder farmers within this cluster enjoy route-to-market advantages. Due to its
 proximity to the City of Polokwane, itself a popular fruit and vegetable market hub,
 famers within the cluster enjoy better route-to-market advantages.
- The Dalmada area can be turned into a fully-fledged urban agriculture hub. Untapped urban agricultural opportunities can be unlocked in small-to medium sized plots along major development corridors and functional development areas (FDAs).

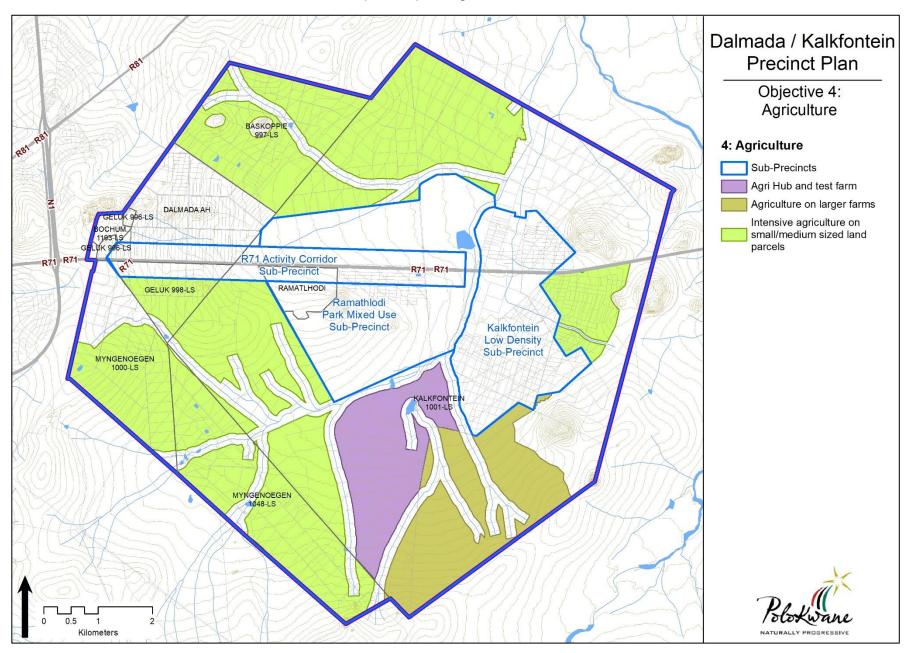
The concept of an Agri-hub is as follows:

- The Agri-hub provides processing, packaging, logistics, equipment hire innovation and a training unit supporting not only farmers within the Precinct, but also those in close vicinity to the Precinct.
- The Agri-hub will create the required framework and platform to support the agriculture sector through research. The emphasis will be tom move away from more conservative farming approaches to a more sustainable form of food production based on precision farming techniques which could involve innovative technologies, including satellite positioning systems like GPS, remote sensing and the internet, to manage crops and reduce the use of fertilizers, pesticides and water.
- The hub could also contain areas for test farming (a proof plaas) as well as limited agro processing capabilities to further enhance the agricultural sector within the Precinct.

Note that complementary to the agricultural proposals contained in this plan, possible green energy applications could also be entertained. Current proposals include applications for solar farms on Portion 37 and 42 of the Farm Kalkfontien 1001-LS. At the time of writing, long term lease agreements have already been concluded with the Maboi 3 and Maboi 6 Communities.

It is recommended to commission an Agri-Hub & Agro-processing research report to kick start and implement this objective.

Map 22: Proposed Agricultural Activities



4.7. Objective 5: Exploit the Tourism Opportunities offered in the Precinct

Earlier sections of this document that deals with land use indicated the recent expansion of tourism related activities such as lodges and bed and breakfasts, specifically in the Dalmada area. A search on www.lekkerslaap.co.za (a well-known South African Booking Engine) reveals 8 guest houses and lodges in Dalmada, examples include Palms Inn Guesthouse, Bolivia Estate, The Village Inn, Mukurumazni Lodge etc.

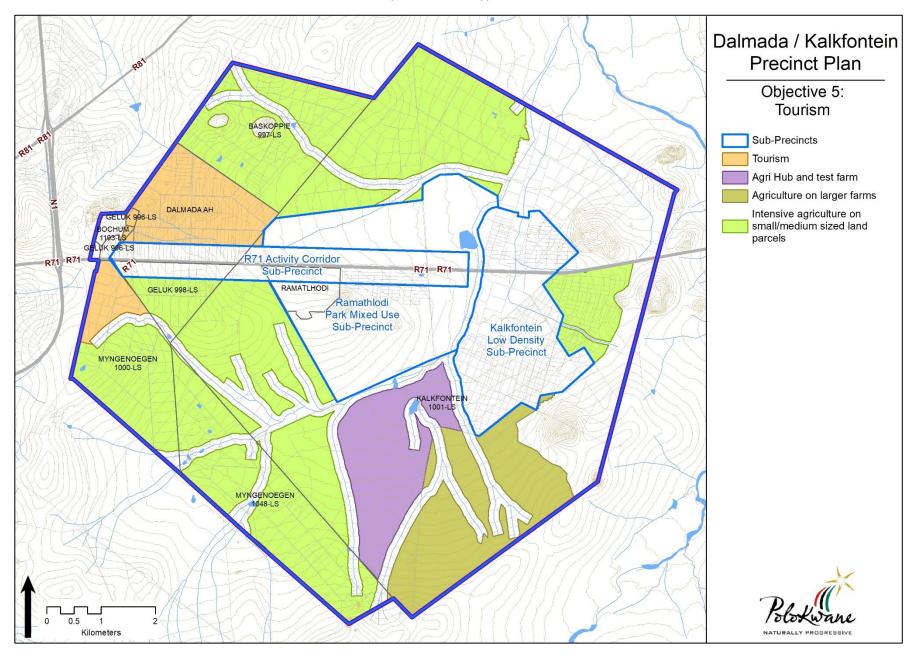
This Precinct plan acknowledges the tourism trend and expands on this through the following proposals:

- The identification of Dalmada AH and Geluk as a mixed-use area offering various tourism opportunities.
- The proposal that the development of the Agi hub is accompanied by a component of Agritourism. Agritourism could be thought of as the crossroads of tourism and agriculture. Stated more technically, agritourism can be defined as a form of commercial enterprise that links agricultural production and/or processing with tourism to attract visitors onto a farm, or other agricultural business for the purposes of entertaining and/or educating the visitors while generating income for the farm, or business owner.
- Agritourism include the following important aspects:
 - o combines the essential elements of the tourism and agriculture industries;
 - o attracts members of the public to visit agricultural operations;
 - is designed to increase farm income; and
 - o provides recreation, entertainment, and/or educational experiences to visitors.
 - Further note that the elements of the Precinct plan under Principle 1 Protect the environment could further add value to the tourism proposals. This could include active use of the blue/green corridors for hiking, horse-riding, mountain biking etc.

Recommendations to implement this objective:

Workshop with stakeholders to develop a tourism plan for the Precinct. This would include all current role-players in the Precinct, the LED function of the Municipality, LEDA, Tourism Associations, sports clubs and associations (e.g., Mountain bike clubs in Polokwane, athletic clubs etc.)

Map 23: Tourism Opportunities



4.8. Future Population of the Precinct

Considering the future human settlement proposals as well as proposed densities in the human settlements as well as proposed Agri-villages, the future population in the Precinct is estimated to be 77 020 (note this includes the current population). The population and number of households for each area is shown in the table below:

Table 15: Future Population in the Precinct

Place	Househ	olds 2041
Place	Population	Households
Baskoppie	795	221
Dalmada AH	3342	928
Geluk	733	204
Kalkfontein	8453	2 348
Myngenoegen	4124	1 146
Bochum	235	65
Ramathlodi Park Sub-Precinct	28 726	7 979
Kalkfontein Low-Density Sub-Precinct	20 867	5 796
New Development north of R71 @ 600m2/erf	9 233	2 565
New Agri-villages @ 5 Ha plots	511	142
Total	77 020	21 394

4.9. Objective 6: Adequate Provision of Community Facilities in support of Sustainable Human Settlements

The status quo section this document highlighted the fact that the Precinct is poorly served in terms of community facilities. Given the future predicted population of 77 020, the CSIR's Guidelines for the Provision of Social Facilities in South African Settlements was used to calculate the quantum of community facilities to be provided for the Precinct. The column labelled "Notes" indicate facilities, that although *required* given the projected population, will not have to be built due to the Precincts proximity to Polokwane CBD where these facilities can already be found.

Table 16: Provision of Community Facilities

Name	Population/ facility	Hectares/ facility	Facilities required	Notes
Community Health Centre	60000	1.5	1	
Primary Health Clinic	24000	0.5	3	
Fire Station (Medium Town)	60000	1	1	Located in town within 10 Km
Police Station	60000	0.5	1	Located in town within 10 Km
Community Performing Arts Centre	50000	0	1	
Branch Library	50000	0.2	1	Located in town within 10 Km
Basic Library	20000	0.15	3	
Home affairs - small office	40000	0.1	1	Located in town within 10 Km
Thusong Centre (Community based "One Stop" Development centres)	60000	0.16	1	All facilities located in CBD
Labour Office	60000	0.0042	1	All facilities located in CBD
Magistrate's Court	60000	0.4	1	All facilities located in CBD
Municipal Office	60000	0.5	1	All facilities located in CBD
Community Hall - Large	60000	0.7	1	
Community Hall - Medium/Small (Fringe Areas)	15000	0.5	5	
Children's Home	20000	1	3	
Home for the Aged	20000	2	3	
ITC Access Point	10000	0.001	7	
Post Office/ Agency with Post Offices	20000	0.03	3	
SASSA (Social Service Office)	60000	0.3	1	Located in town within 10 Km
Social Grant Pay Point	40000	0.0042	1	Located in town within 10 Km
Cemetery - Medium	50000	8.8	1	
ABET/Skill Training	50000	1	1	
Secondary School (Medium)	7500	3.2	10	
Primary School (medium)	4500	2.8	17	
Post Matric Skills Training	50000	1	1	
Small Creche/ Early Childhood Development Centre	3000	0.09	25	
ECD Resource Hub	20000	0.1	3	
Grassed Surface (2 football field equivalent)	15000	1.2	5	
Sport complex (Grouping of fields and/or sport complexes)	60000	2	1	
Cricket oval	60000	1.6	1	
Athletics/cricket stadium (Grassed Field and athletics track & stand 3000+ seats)	60000	2	1	
Combi Court Surface (x2)	15000	0.15	5	
Combi Court Surface (x4)	60000	0.3	1	
District Park	50000	10	1	
Community Park with Play equipment	30000	3.5	2	
Local/ Neighbourhood Park (includes play Equipment)	15000	1.5	5	

Map 24 below provides an indication of where community facilities should be provided based on the future size of the settlements. Note that it considers proposals from Ramathlodi Park and Ext. 1.

Public engagement as well as consultation with the Municipality clearly indicated the need for a cemetery. The table above suggest that the future population of the Precinct will be sufficient to allow for such. Provision is made in the implementation plan for a feasibility study for a cemetery, preferably on public owned land (if available, and conditions allowing for such).

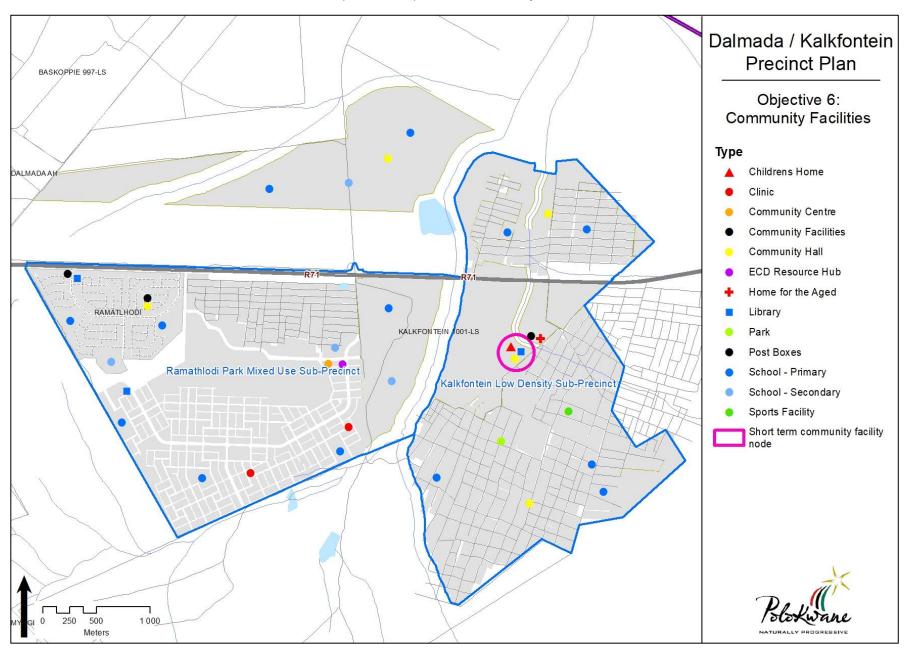
The above table should be used in conjunction with the township establishment process (as part of the Human Settlement proposals) to ensure adequate provision of community facilities over time. However, one of the key challenges facing the community at Kalkfontein is the complete lack of any community facilities. It is therefore proposed that a community facility node be developed as indicated in Map 24 to service the most important needs of the community in an interim basis.

Facilities that could be considered for this node include:

- A small clinic
- A satellite SASSA branch
- A small community hall
- Education and Skills Development Services
- Information and Communication Services

Once the Precinct have been formalised, the community facility node could be re-purposed to provide facilities in line with the townships establishment proposals for the sub-precinct.

Map 24: Future provision of community facilities



4.10. Objective 7: Adequate Provision of Engineering Infrastructure in support of Sustainable Human Settlements

In order to determine the quantum of Engineering Services that will be required to service the future population of the precinct, use was made of population projections and current proposals.

4.10.1. Estimated Water Demand

The basic assumptions informing water demand is as follows:

Levels of service:

- Residential 1: 15-25mm connection to building (multiple taps)
- Residential 2: 15-25mm connection to building (multiple taps)
- Business 1 (Along R71): 150mm or larger consumer connection
- Business 2: Within Ramathlodi Park Ext. 1: 40-100mm consumer connection
- Educational: 40-100mm consumer connection

Table 17: Estimated Water Demand for the Precinct

Zoning category	Nr of consumers	No of residential units	GLA (m2)	M ł demand/ day	Peak factor provision (ml/day)
Residential 1	21394	20088	0	24.11	96.4
Residential 3	65	1386	0	1.39	5.5
Business	14	0	1 735 491	7.05	28.2
Educational	27	0	0	41.75	167.0
Total	21500	21474	1735490.7	74.29	297.2

4.10.2. Estimated Sanitation Demand

The basic assumptions informing sanitation demand is as follows:

Levels of service:

 Residential 1: Waterborne sewerage to each stand 110 mm connection, with toilet structure

- Residential 2: Waterborne sewerage to each stand 110 mm connection, with toilet structure
- Business: Waterborne sewerage to each stand 110 mm connection, with toilet structure
- Educational: Waterborne sewer, connection size 150 mm or larger

Table 18: Estimated Sanitation Demand for the Precinct

Zoning	Nr of erven	No of residential units	Mℓ / day	Mt / day with peak factor	Mt / day with extraneous flow considered
Residential 1	20 088	20 088	74.24	185.60	213.44
Residential 3	65	1386	35.4	88.66	101.96
Totals	21559	23320	118.06	295.16	315.41

Note that discharge from day schools and business sites need not be considered sine these are relatively minor flows not peaking at the same time as residential flow.

4.10.3. Solid Waste

The table below provides an indication of the Solid Waste Requirements associated with the Precinct.

Table 19: Solid Waste Requirements

Residential category	Income level	HH Size	Nr of HHs	Nr of people	Waste generated/ capita/ annum (m³)	Waste generated/ HH/annum (m³)	Total waste generated (m³)/annum	Density/m³ expressed in kg	Annual waste (tonnes)	Weekly waste (tonnes)
Residential 1	Medium income	3.6	20 088	72 317	0.75	2.93	58 757.40	215	12 632.84	242.94
Residential 3	Low income	3.6	1386	4 990	0.20	0.78	1 081.08	300	324.32	6.24
Totals			21 474	77 306			59 838.48		12 957.17	249.18

4.10.4. Electricity

The ADMD assumptions are provided below:

Table 20: ADMD Assumptions

Zoning	kVA
Residential	2.37
Business	5.3
Education	5.3

The bulk supply demand for the Precinct is provided in the following table:

Table 21: Bulk Supply Demand for the Precinct

Zoning	Nr of erven/ customer units	ADMD (kVA)	Electricity losses	Total (kW)
Residential 1	20 088	47 609	4 761	52 369
Residential 3	1 386	3 285	328	3 613
Business 1	386	2 044	204	2 248
Educational	27	143	14	157
Totals	21 887	53 081	5 308	58 389

5. Implementation Plan

5.1. List of projects and actions

Table 22: Implementation Framework

Spatial Principle	Proposal	Project Description	Indicative Budget	Approximate Timeframe	Implementation Agent
Objective 1: Protect the Natural Environment	Establishment of the Dalmada/Kalkfontein Integrated Blue Green Corridor System	Initial meeting with DEA with specific aim to present the concept of an Integrated Blue-Green Corridor System. Elicit input from DEA, including Working for Ecosystems and Working for Water Programs to identify the steps required to establish the corridor as well as get people involved through EPWP program.	-	Year 2	COP, Dept. Forestry, Fisheries, and the Environment.
		Follow up workshop with DEA, Local Business and Mining Sectors to present the idea and elicit input.		Year 3	
		Possible future TOR and appointment of service providers.		Year 5	
Objective 2: Leverage the importance of the R71 as Eastern Gateway to Polokwane and important Activity Corridor	Deal with illegal land uses	Issue contravention notices to owners exercising illegal land uses along the R71	-	Year 1	COP - Planning Function
	Establish the R71 Activity Corridor Township	Landowner discussions with landowners along the R71 discussing the future of the corridor and the possibility of township establishment	-	Year 1	COP - Planning Function
		Feasibility studies and valuation reports	R 400 000	Year 3	COP, service providers to be appointed.
		Acquire land (should this be necessary)		Year 4	СОР
		Township Establishment	R 500 000	Year 5	COP, service providers to be appointed.
	Market the R71 Activity Corridor	Investor conference marketing the opportunities in the R71 Corridor	R100 000	Year 5	COP
	Design guidelines along R71 Corridor	Develop Urban Design Guidelines for land uses bordering the R71 Corridor	R 500 000	Year 4	СОР

Spatial Principle	Proposal	Project Description	Indicative Budget	Approximate Timeframe	Implementation Agent
Objective 3: Provision of Human Settlements	Formalisation of Kalkfontein Low Density Sub-Precinct	Consultation with landowners and affected parties	-	Year 1	СОР
		Formalisation of the Sub-Precinct (note that depending on the outcomes of the land claims process as well as landowner discussions, this could take the form of a township establishment OR formalisation up to general plan stage). 5 800 erven @ R1 500/erf.	R 8 700 000	Year 3	COP, service providers to be appointed.
	Formalisation of Ramathlodi Park Mixed Use Sub-Precinct	Consultation with landowners and affected parties			
		Complete Township establishment application of Ramathlodi Park Ext. 1	In process		
		Formalisation of current village in sub-Precinct (south of R71, north of Ramathlodi Park Ext. 1) as well as new development area directly adjacent to both). Note that depending on the outcomes of the land claims process as well as landowner discussions, this could take the form of a township establishment OR formalisation up to general plan stage. 1 567 erven @ R1 500/erf.	R2 350 500	Year 4	COP, service providers to be appointed.
	Township Establishment north of the R71	Feasibility study to establish a township north of the R71	R 400 000	Year 5	COP, service providers to be appointed.
		Formalisation of human settlement north of R71. (Township establishment or General Plan). 2 565 erven @ R1 500/erf.	R3 847 039	Year 6	COP, service providers to be appointed.
Objective 4: Expand on the Agricultural Opportunities offered by the Dalmada farming belt	Agri-Hub & Agro-processing research report	Landowner discussions	-	Year 4	СОР
		Initial Discussions with Dept. of Agriculture Rural Development and Land Reform, Polokwane Fresh Produce Market and Limpopo Economic Development Agency (LEDA) to present the concept and obtain inputs.	-	Year 2	COP, DALRRD, LEDA, Polokwane Fresh Produce Market
		Appointment of a consortium of service providers to conduct detail feasibility study for an Agri-hub and agro-processing facility in the Precinct.	R 650 000	Year 4	COP, service providers to be appointed.
		Acquiring land use rights	Not currently known	Year 6	СОР

Objective 5: Exploit the Tourism Opportunities offered in the Precinct	Exploit the Tourism Opportunities offered in the Precinct	Workshop with stakeholders to develop a tourism plan for the Precinct. This would include all current role-players in the Precinct, the LED function of the Municipality, LEDA, Tourism Associations, sports clubs and associations (e.g., Mountain bike clubs in Polokwane, athletic clubs etc.)	-	Year 4	
Objective 6: Adequate Provision of Community Facilities in support of Sustainable Human Settlements	Provision of new Cemetery in the Precinct.	Feasibility study for new Cemetery located in the Precinct.	R 450 000	Year 1	COP
		Development of Community Facility Node in the Kalkfontein Sub-Precinct	Cost to be determined based on the type of facilities provided	Year 3	COP, Limpopo Dept. of Health, SASSA, Limpopo Dept. of Education.
	Short term provision of key community facilities in the Kalkfontein Sub-Precinct	To be determined as the townships establishment and formalisation processes unfold. Aras to be prioritised - Kalkfontein and Ramathlodi Park Sub-Precincts			
Objective 7: Adequate Provision of Engineering Infrastructure in support of Sustainable Human Settlements		To be determined as the townships establishment and formalisation processes unfold. Aras to be prioritised - Kalkfontein and Ramathlodi Park Sub-Precincts	Each individual service package to be costed by COP		СОР
Other initiatives	Land Audit Report for Precinct	There are several illegal land uses in the Precinct. This project will conduct a land audit, comparing the land uses to the actual zoning and suggestion proper recourse (which could include enforcement of the By-Laws.	R 500 000	Year 2	COP, service providers to be appointed.
	Land Claims and Land Release	Conduct a formal meeting between all parties of the land claim, owners of the property, the Municipal Manager and the Regional Land Claims Commissioner to fast track the land claim process and subsequent release of land.	-	Year 1 (Immediate)	COP, Land Claims Commissioner, interested and affected parties.