Tygerberg

Integrated district spatial development framework and environmental management framework

Vol. 3: Implementation Plan





CITY OF CAPE TOWN ISIXEKO SASEKAPA STAD KAAPSTAD

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1 Implementation plan

The primary objective of the Implementation Plan is to provide guidance in terms of prioritised public investment, local area and precinct planning priorities and enablement mechanisms required to implement the proposals contained in the integrated District Spatial Development Framework(DSDF) and Environmental Management Framework(EMF) and sub-district DSDF. The plan consists of the following key sections described and depicted in the Figure 1 Figure 1 below.



1.1 Approach to implementation

The components of the Implementation Plan work together to provide clear direction and certainty in spatially targeted areas. These are prioritised areas where the City should make a concerted effort to align its processes and pull its resources to support and enable development in line with the integrated DSDF and EMF spatial planning objectives. To effectively achieve this, the following three key interventions are proposed (which include linkages to the corresponding components of this Implementation Plan).

- Public investment: Integrated and aligned public sector investment through Urban Restructuring and Upgrading (section 1.2), the Spatial Targeting Framework (section 1.3) and Local Area Planning Priorities (section 1.4).
- Ease of process: Removing red tape and improving institutional efficiencies by withdrawing contradictory or overlapping local planning policy with the approval

of the integrated DSDF and EMF (section 1.5) or pursuing mechanisms to streamline processes such as development applications (section 1.6) in line with strategic planning initiatives to provide certainty and transparency to developers and businesses.

• Enabling incentives: Development Mechanisms (section 1.6) to stimulate private sector development and leverage public investment designed to change the behaviour of role-players in the property development process or influence their decisions in order to achieve specific outcomes.

This process is conceptualised in <u>Figure 2</u>Figure 2 below.



1.2 Urban restructuring and upgrading proposals

Urban restructuring and upgrading deal with changes that need to occur within the existing urban footprint to reinforce the DSFS's development proposals at a district and sub-district scale. This requires sector-specific capital investment to support the development proposals. Furthermore, urban restructuring and upgrading informs planning around new capital investment requirements associated with new development areas and areas where major intensification is proposed in the integrated DSDF and EMFs.

Two considerations are important in terms of planning for services (public facilities, parks) and infrastructure (transport, bulk infrastructure/utility services). First, there is a need to address backlogs based on the existing demands and secondly, a need to plan for new demand. In terms of the latter, the integrated DSDF and EMF attempts to inform future development by:

- Locating areas for intensification of urban use (e.g. areas where redevelopment is being promoted) as well as new development areas (focussed on significant green field development).
- Providing some indication, where possible, of the quantum of development and likely phasing of development, which will be indicated in the integrated DSDF and EMF and land use model.

These areas for future development have been identified in the Tygerberg integrated DSDF and EMF Technical Report. These include areas for mixed-use Intensification and the New Development Areas.

While the Tygerberg integrated DSDF and EMF promotes general intensification across the district and in particular along the Voortrekker Road corridor, further specific areas identified for mixed use intensification include:

- Elsiesriver industrial area adjacent to the station (taking account of appropriate integration with existing industrial land uses).
- Hugo Street and Vasco Boulevard linking Voortrekker Road to the N1 City district node.
- Portions of local activity streets such as Halt -, Connaught , Delft Main , Belhar Main -, and Old Paarl Roads.

Significant new development areas in the Tygerberg District include:

- Parow Golf Course;
- Tygerberg and Stikland hospital sites;
- Portions of land along Symphony Way;
- De Grendel Farm;
- Haasendal, and
- Saxenburg(Polkadraai)

Taking the above into account the following section deals with the capital investment that would be required to support the implementation of the integrated DSDF and EMF.

1.2.1 Transport & Access infrastructure

The section below highlights transport and access related infrastructure planned for the short, medium and long term and include future projects and requirements for roads, public transport and non-motorised transport. The prioritisation of interventions in relation to transport infrastructure should be informed by the following key objectives:

- Optimising development and movement opportunities.
- Making a more 'walkable city'. Ensuring all roads, except freeways, are as much for people as they are for vehicles.
- Prioritisation of public transport over private mobility.
- Reducing the average household transport costs.
- Reducing the city's overall carbon footprint.

1.2.1.1 New road links

There are a number of existing new road link proposals in the district. While these are all important to the overall (eventual) integration and functioning of the district, in terms of

the stated shift in focus for transport infrastructure in the city and in the Tygerberg district, the most important new road link required in the district are the proposed Robert Sobukwe/Durban Road re-alignment which will improve accessibility through Bellville CBD and relief congestion. While other road links will assist freight and public transport movement to a degree, they are primarily focussed on private mobility. Thus, while not dismissed as opportunities, the significance of the social and economic impact of other priorities in terms of the movement system could be more in the short to medium term. *New road links*

- Extension of Zevenzicht Link Road to link with Bottelary Road, as well as new interchange with Polkadraai Road to support the new development of smallholdings in Saxenburg and Haasendal areas.
- Completion of Saxdowne Road to Van Riebeeck Road to support the development of the Haasendal area and refief congestion.
- Extension of Erica Drive to east over the R300, i.e. Belhar Road to increase accessibility to and from Highbury and Belhar
- Robert Sobukwe east extension between Peter Barlow Drive and Strand Road/La Belle to increase north-south linkages, provide congestion relief and re-routing of freight traffic.

Road upgrades

- Doubling of Amandel Road (Kuils River) from Bottelary River to Langverwacht Road.
- Upgrade of Bottelary Road from Amandel Road intersection to the east to facilitate developments in Haasendal area as well as along Botfontein Road. The issue of the applicable roads authority needs to be resolved as a matter of urgency.
- Upgrade of Jakes Gerwel Drive to freeway between N1 and N2

1.2.1.2 Public transport

Of key importance into the longer term as the most cost-effective transport, but also relief on city road system, is the re-establishment of rail as a primary public transport route. Proposed priority station upgrades to support the heightened role of these places within the area include:

- Kuilsriver station
- Bellville station
- De Grendel station

This includes major building and refurbishment in some cases (i.e. Bellville, Kuilsriver), park and ride facilities, and non-motorised transport (NMT) facilities (paths, underways or bridges, bicycle facilities). Attention needs to be given to significantly expanding 'park and ride' facilities associated with the stations in considering the longer-term future of rail ridership. The rail line is highly integrated into the district and the (potential) functioning thereof.

• The Blue Downs rail link between the Strand-Bellville line and Khayelitsha/Mitchells Plain with its associated proposed stations (Blackheath, Blue Downs & Mfuleni) is a long term proposal that would increase accessibility from north to south. However, it should be noted that the implementation of this rail link is beyond the control of the municipality.

- The Bellville Public Transport Interchange redevelopment poses huge potential for infill mixed-use development, and accessibility needs to be increased to facilitate the re-development. Various projects including new and upgraded transport infrastructure is required to implement this vision and include inter alia:
 - The extension of Tienie Meyer bypass to the east.
 - Potential extension of Willie Hofmeyer Road to the south to link with Kasselsvlei Road.
 - The extension of Church Street to link with Robert Sobukwe Road.
 - Extension of Robert Sobukwe Road to link with a re-routed Durban Road (as IRT- trunk route 13), to also facilitate re-development between said road and Durban Road. This would provide relief to roads such as Durban, Voortrekker, Maree and Bill Bezuidenhout Roads as well as provide a more direct freight route from the industrial areas and the N1 freeway. Note that the planning of the Bellville PTI is in process, and a final approved development framework will serve as the guiding tool for the re-development of the PTI and surrounds (Urban Catalytic Investment Department as responsible facilitator).
- The Parow PTI

1.2.1.3 Non-motorised transport

Investment in NMT infrastructure is a priority in this district. Intervention should occur as part of a programme to develop a broader NMT network. Plan for and implement links between these routes and adjacent/accessible roads, public transport, and parking to support pedestrian access to and utilisation along the NMT.

In the Tygerberg district, interventions should focus on:

- NMT along development corridors and at main movement generators (i.e. transport interchange/station areas see above). This includes along development corridor main roads, with primary focus on pavements and pedestrian links across roads (design, surfacing, street furniture, etc.). It may also where possible also include bike routes, but these may often be better accommodated along parallel supporting connector routes or in association with the identified open space link related routes. See the City's planned NMT network for guidance.
- The role of NMT for bikes, including especially commuter bikes, will become increasingly important along particularly district connector routes in line with the City's increasing focus on densification, walkability and liveability, and new bike technology (especially the emergence of electric bikes). A major focus must be on safety (and security) with a goal of zero deaths, which has implications for changes to current design of movement routes (e.g. separation of NMT, traffic calming, nature of road crossings), the management thereof (e.g. vehicular speed) and the nature of urban development interfacing with these routes (positive frontages will support surveillance and safety).
- The development of main public (and where possible private) links into and through major open space areas in the district which connect destination places and movement generators. These include nature tracks for hiking and biking. In the Tygerberg district this should include linkages along Kuils- and Bottelary rivers, where possible, as well as into the Tygerberg and UWC nature reserves to enhance the tourism and recreation industry.

- The linking of significant public open spaces within urban areas, along open space (green) corridors or most appropriate public roads, towards the establishment of a network accessible to NMT across the district, and through the district to neighbouring districts. This should include the establishment of pathways through/around/along open spaces, and appropriately (re-)designed, landscaped, tree-planted roads/pavements between these open spaces.
- Tree planting and landscaping should be a focus (for Ward budgets, adjacent property developers, etc.) along identified NMT routes to assist with NMT legibility, safety, and attractiveness, while progressively contributing to urban heat generation mitigation by effectively narrowing asphalt exposure to the sun.

1.2.1.4 Road schemes

There are hundreds of road schemes in existence across Cape Town, primarily road widening schemes for existing roads, but also schemes for new roads. However, these schemes are generally now dated and many may no longer be appropriate or necessary given the changing urban context of greater density, a greater emphasis on public transport and more pedestrian orientated environments, and not least, increasing fiscal constraints.

These schemes can be a significant obstacle to urban development on erven adjacent to them, as planned developments are required to take account for proposed road widening (re-building line setbacks, etc.). This can have a substantial medium- to longterm impact on the built environment (with buildings unnecessarily setback from the road and often poorly defined as well as wasted carriageway/pavement space and is an additional, potentially unnecessary, regulatory 'hoop' to go through. It is proposed that an urgent (and thereafter regular) review of the road schemes is undertaken by the Transport Department to inform urban development processes in the respective areas.

1.2.2 Environmental Infrastructure and Open Space System

Open space upgrading, enhancement and development (associated with the natural environment and sports and recreation facilities which form part of the green infrastructure network) are critical to achieving the vision for this district. In particular, the latent potential of the existing natural systems should be optimised. In this regard, several interventions relating to the open space system are proposed.

1.2.2.1 Biodiversity

- Building of the Symphony Way Environmental Education Centre.
- Upgrade of Tygerberg Nature Reserve visitor facilities.

1.2.2.2 Water Systems

• Development of a plan for the upgrading of the Elsieskraal River corridor.

1.2.3 Human settlements

In the context of the integrated DSDF and EMF, Human Settlements relates to the realisation of a range of housing opportunities, formal or informal, that the public sector plays a role in providing or supporting. The integrated DSDF and EMF supports this process through:

- giving direction to where these opportunities could occur by identifying land suitable for urban development.
- giving further spatial direction through identifying "new opportunities" for subsidised housing development.
- identified areas to apply inclusionary housing policies.
- identifying areas for incremental upgrading, and
- identifying areas for potential shortened land development procedures (i.e. the NDAS and Mixed Use Intensification areas).

Planned/ Proposed Housing Projects

The following areas within the Tygerberg district have been identified as sites for the development of new human settlements projects.

Area	Lead /	Timeframe	Notes
	Programme	(Short / Medium / Long)	
Bellville -	FLISP	Compl date - 2023	3788 units
Belhar CBD Ph2			(Implementation)
Delft -	UISP	Compl date -2025	873 units
Tsunami and TRA5.1			(Feasibility)
Kuils River -	FLISP	Compl date -2021	45 units
Highbury Park			(Implementation)
Kuils River –	FLISP	Compl date -2024	198 units
Erf 12132			(Planning)
Matroosfontein -	FLISP	Compl date -2025	355 units
Erf109533, Charlesville			(Planning)
Leonsdale	IRDP	Compl date -2025	1370 units
			(Initiation)
Symphony Way	BNG	Short	3261 units
Belhar	BNG	Medium	1300 units
Bonteheuwel	BNG	Medium	361 units
Elsies	BNG	Medium	761 units
Parow –	Social housing	Medium	2 249 units
Erven 14272, 22550			
Elsies	Social housing	Medium	400 units

Table 1: Planned Proposed housing projects

1.2.3.1 Site for Investigation

Further land has been identified specifically for investigation for publicly assisted housing projects (see Figure 4). This is limited to publicly owned land and will be updated over time based on new information. This includes various portions of undeveloped or underutilised land. The areas where land has been identified for publicly assisted housing projects within the Tygerberg District include Symphony Way, Eureka Estate and Greater Belhar area.

1.2.3.2 Inclusionary Housing

The City is currently in the process of developing an Inclusionary Housing Policy, which is a key deliverable of the 2021 approved CCT Human Settlements Strategy. The aim of the policy is to help stimulate the provision of affordable housing¹ by the private sector. In the absence of policy, potential areas in close proximity to public transport, public amenities and employment opportunities (such as nodes, corridors and mix use development and/or intensification areas) should be considered for inclusionary housing.

1.2.3.3 Informal Settlement Upgrade

The table below indicates the informal settlement areas that has been identified for upgrade.

Table 2: Informal settlement upgrading

Area	No. of units	Notes
Kalkfontein	830	In construction

1.2.4 Bulk infrastructure

The following section deals with the current infrastructure capacities and pipeline projects identified for the short, medium and longer term which is necessary in order to support proposals in the integrated DSDF and EMF, infrastructure maintenance and upgrading.

1.2.4.1 Waste Water Treatment Works

The section below highlights the WWTW that are located within the Tygerberg district and proposed projects required to support future development.

• Borcherds Quarry WWTW (design capacity 42 MI/day, current flow 29 MI/d):

The WWTW was recently extensively refurbished, and its capacity was increased from 35 MI/d to 42 MI/d to cater for King David commercial/industrial, CTIA upgrade project and part of Symphony Way Housing (split between Borcherds Quarry and Zandvliet).

• Bellville WWTW (design capacity 75 MI/d, current flow 29.4 MI/d):

A new 20 MI/d membrane bioreactor module was commissioned at the Bellville WWTW in 2015, with space for a second 20 MI/d module for the future. The older 55 MI/d module

¹ Affordability is a function of context. The National Government determines that the GAP market (those households who should be targeted for affordable housing provision) refers to households earning less than R22 000pm. This Strategy recognises that nominal indicator whilst maintaining that affordability fluctuates dependent on the context in which housing is available; and that it would never be targeted at the highest earning income group of that context (City of Cape Town Approved Human Settlement Strategy., 2021).

is currently being completely refurbished and its treatment process upgraded, to ensure good quality treated effluent into the future.

The Bellville WWTW treats a larger wastewater flow from the Northern district than from the Tygerberg district, however the WWTW is located within the Tygerberg district. This WWTW will receive the bulk of wastewater related to the Bellville CBD and Voortrekker Road upgrade/densification.

The following WWTWs are not located within the district's boundaries, however receive wastewater from the Tygerberg district and requires upgrading to accommodate future development:

• Potsdam WWTW (design capacity 47 MI/d, current flow 39 MI/d):

The Potsdam WWTW is currently operating near its flow capacity and over its nutrient load capacity, and no further flows to Potsdam will be approved until its capacity is upgraded. This affects the entire area north of the N1, as well as the N1 City precinct, Tygerdal and Glenwood.

An upgrade project is currently underway that will increase the treatment capacity of the Potsdam WWTW to 100 MI/d by the addition of a new membrane bioreactor treatment module.

• Athlone WwTW (design capacity 105 MI/d, current flow 87 MI/d):

The Athlone WwTW is nearing its flow capacity, and is almost at its design nutrient load capacity. Development stop (i.e. no further approval of flows until upgrade complete) may be implemented, if necessary. This would affect the Parow, Goodwood, Elsies River, Ruyterwacht Thornton and Epping areas.

An upgrade project is currently underway that will refurbish and upgrade the existing treatment module, and provide an additional 50 MI/d treatment module to increase the treatment capacity of the WWTW from 105 to 155 MI/d.

• Zandvliet WWTW (capacity 72 MI/d, current flow 75 MI/d)

The Zandvliet catchment is currently the fastest growing catchment in terms of wastewater production within the City. The WWTW is currently operating above its flow capacity and significantly above its nutrient load capacity. No new flows to the WWTW will be approved until its capacity is upgraded. This affects the area east of the airport and south of Stellenbosch Road (Delft), as well as small catchments to the south and far east of Kuilsriver.

An upgrade project is currently underway that will provide significant refurbishment and upgrades to the existing two treatment trains, as well as a new combined inlet works, new combined primary sedimentation, new combined mechanical sludge dewatering facility, new combined disinfection facility and a further 18 MI/d membrane bioreactor treatment train to increase the WWTW capacity from 72 to 90 MI/d.

It is likely that soon after completion of the current capacity upgrade a further capacity upgrade will be required to incrementally increase the WwTW capacity further towards its ultimate 150 MI/d requirement. Some process units provided under the current upgrade are already sized to accommodate this ultimate flow. The Zandvliet WWTW may

remain a constraint for development in the catchment until after the second capacity upgrade.

1.2.4.2 Stormwater

The section below highlights the projects with a value of above R5 million rand that forms part of the pipeline to maintain and upgrade the stormwater systems within the Tygerberg district.

- Bontheuwel canal upgrade Enclosure of existing canal
- Kalksteenfontein canal upgrade Enclosure of existing Netreg canal
- Upgrading of main stormwater artery in Robert Sobukwe Road
- New regional stormwater pond at the northern corner of Robert Sobukwe Road and Stellenbosch Arterial
- Construction of a detention pond adjacent to the Stellenbosch university Hospital campus upstream of Elsiesriver
- Culvert upgrades:
 - Ravensmead (and stormwater pump)
 - Goodwood
- Stormwater conduit
 - Parow North
 - Ravensmead/Beacon Valley

1.2.4.3 Electricity major projects

This section describes the major projects envisioned for the period 2020 - 2030, exceeding R10 million in capital expenditure and which will be subject to the corporate stage-gate process. Projects discussed in this section can either comprise new bulk infrastructure, refurbishment, replacement, improvement, expansion or upgrade projects.

Project	Description					
Triangle 132kV Upgrade / Bellville Southupgrade/ Oakdale Ph 3	 The load on the Stikland – Oakdale, Stikland – Triangle and Stikland – Bellville South 66 kV lines are close to the firm capacity of these feeders. This necessitates the upgrade of this network from 66 kV to 132 kV. The projects' details are listed below: Triangle 132kV Upgrade Constructing a new Triangle 132kV switching station Establishing 132kV feeders from Morgen Gronde switching station (Northern District) to Triangle switching station. Replacing the 3 X 66kV / 11kV 20 MVA transformers with 2 X 132kV / 11kV 50 MVA transformers and thereby increasing the available firm capacity by 25%. Bellville South Upgrade Establishing 132kV feeders from Triangle switching station to Bellville South main substation. Replacing the 3 X 66kV / 11kV 20 MVA transformers with 2 X 132kV / 11kV 50 MVA transformers and thereby increasing the available firm capacity by 25%. Bellville South Upgrade Establishing 132kV feeders from Triangle switching station to Bellville South main substation. Replacing the 3 X 66kV / 11kV 20 MVA transformers with 2 X 132kV / 11kV 50 MVA transformers and thereby increasing the available firm capacity by 25%. Oakdale Ph 3 					

Table 3: Electricity projects (excluding ESKOM)

Project	Description
	Oakdale 132 kV switching station (Oakdale Phase 2 project, Northern District)
	was commissioned in 2017, currently operated at 66 kV. Both the Boston and
	Oakdale transformers are dual ratio transformers, hence no need to upgrade
	these transformers when the network is upgraded to 132 kV. The upgrade to
	132kV will however increase the firm capacity in both these footprints from 30
	MVA to 50 MVA.
Monte Vista MS and Richmond 132 kV/66 kV stepdown and 66 kV SwStn	The footprints of Plattekloof, Elsies River, N1, Tiervlei and Richmond Estate are supplied from three different Eskom supply points, i.e. Plattekloof 66 kV (Elsies River, N1, Tiervlei), Plattekloof 11 kV and Acacia 132 kV (Richmond Estate). In order to rationalise the number of Eskom supply points, and combine them into a transmission supply point to benefit from better tariffs, the City aim to construct Richmond Estate 132/66 kV stepdown, 66 kV switching station and a new Monte Vista MS. A new Monte Vista MS is proposed to supply all the load north of the N1. This loading will comprise of the existing N1 MS and Plattekloof 11 kV loads and a portion of the existing Richmond Estate 132/66 kV stepdown and 66 kV switching station is required. A cost justification study was performed in 2019 to investigate whether the cost of the proposed infrastructure can be offset by the tariff saving, but this is not yet feasible. A high-level estimate is that the project will only be feasible in 10 years' time, as tariffs and loads increase.

ESKOM electricity projects

Acacia Main Transmission Station(MTS) falls within the Tygerberg District. According to Eskom's Transmission Development plan (2021 – 2030), Eskom plans on constructing a second Koeberg – Acacia 400kV line, spanning the Blaauwberg, Northern and Tygerberg Districts.

Cross-linkages between City and ESKOM

Eskom's Acacia MTS provides 132 kV intake points to the City's Richmond Estate main substation (Tygerberg District), as well as the City's Montague Gardens and Foreshore switching stations (Table Bay District). The City started negotiations with Eskom to transfer the 132kV Acacia – Montague Gardens feeders from Eskom to the City in order to realise a transmission supply point directly from Eskom's Acacia MTS to benefit from better tariffs. Long term load forecasts from the City suggest that Eskom's Acacia 400/132 kV transformers will be close to its firm capacity in 2045. Various options exist to ensure the supply to this area remains firm, which include a fourth 400/132 kV transformer at Acacia MTS, or a new 400/132 kV step-down closer to the CBD (proposed at the Transwerk site, Table Bay District). These options are currently being investigated but falls outside of the 10-year time horizon of this report. This area is however densely populated and it is therefore imperative that the City closely work with Eskom to ensure servitudes are secured in time. A proposed 400kV corridor from Acacia MTS to the proposed Transwerk site along the N1 is under investigation.

The City will construct Morgen Gronde SwStn (in the Northern District) and transfer existing 66kV intake points, Bellville South, Triangle and Oakdale (1 & 2), to Morgen Gronde SwStn, upgrading the supply to nearly half of the 66kV load to 132kV networks due to network capacity constraints.

Eskom have plans to upgrade nearly all of their remaining 66kV load to 132kV in the near future, meaning that apart from a single 11kV overhead line the 66kV bus will only supply the City's load (Brackenfell, Langverwacht and Eversdal). Portions of the Stikland – Langverwacht and Stikland – Eversdal 66kV circuits transverse the Tygerberg District. It was already agreed in principle that since nearly all of the Eskom distribution load (i.e. 66kV load) will be transferred, it will be worthwhile to only have Eskom Transmission and the City as owners of the Stikland MTS equipment. The point of supply at Stikland MTS is yet to be determined but will most definitely result in the transfer of assets from Eskom distribution line division to the City.

1.2.5 Public facilities and public space

The Community Services and Health Infrastructure Plan (CSHIP, 2019) advocates for the principles of facility clustering and co-location and promotion of integrated precincts in the investment of social facilities in future. The concentration of resources in civic clusters is encouraged in order to leverage City investment and resources, optimise space and facility use, address vandalism and promote safety within civic clusters; support greater efficiency in terms of operation and management and ultimately create quality accessible social community facilities. The Infrastructure Plan also advocates for the optimisation of resources by consolidating existing facilities in order to ensure operation and maintenance resources are utilised efficiently and effectively.

Figure 3 illustrates a hierarchy of nodes (depicted by circles and size of circle) which is the development framework) and a ranking at a citywide level, depicted by the number in the circle which is the key prioritisation framework. The hierarchy of nodes and the ranking encapsulate the plan of the proposals for development for this district. It should be noted that the proposed facilities as set out in the Community Services and Health Infrastructure Plan remain a key capital investment priority with regards to Community Facilities. Figure 3 and Table 4 should be should be read together as they both indicate areas of need in order of priority (ranking) at both district level and a metro wide scale. The Delft(The Hague) node is ranked 1 in the district in terms of need and 4th at a city wide level.



Figure 3: Hierarchy and ranking of nodes for 2020 estimates

Where new facilities are required the approach should be to implement the principle of co-location and clustering of facilities within the prioritized nodal points/civic clusters that include ensuring that facilities are located close to public transport particularly capitalizing on the MyCiTi bus and other transport networks. It is also important to note the recommended sizes for the facilities for each node and these are outlined in the Community Services& Health Guidelines and Standards, 2020 document.

The table below is a guide and highlights key facility development priorities within specific catchments (and nodes) resulting from the modelling exercise across the district. It should be noted that this is a guide in terms of the type of facilities of highest need within the catchment areas. Targeted investment into these nodes and facility types is key to addressing the existing service shortfalls and providing access to communities where those facilities are required most The Delft (The Hague) node should be prioritised in terms of investment, particularly for sports grounds, neighbourhood parks as well as schools.

Catchment & Node	Rank in District	Rank City Wide	Facilities of greatest need	Sub-district
			Community Park	
			Sports Grounds	
			Community Library	
Delft The Hague	1	4	Neighbourhood Parks	Sub-district 6: Greater Belhar & Delft
			Secondary Schools	
			Primary Schools	
			Community Parks	
			Sports Grounds	
			Secondary Schools	
Delft CBD	2	7	Regional Library	Sub-district 6: Greater Belhar & Delft
			Neighbourhood Parks	
			Regional Park	
		13	Sports Grounds	
	3		Secondary Schools	
Delft South			Community Park	Sub-district 6: Greater Belhar & Delft
			Neighbourhood Parks	
			Primary Schools	
			Sports Ground	
	4	20	Secondary Schools	Sub-district 4: Ruyterwacht, Greater Elsies
Bonteheuwel			4 20	Primary Schools
			Neighbourhood Parks	
			Community Library	
Kuils River	5	24	Community Parks	Sub-district 8
			Primary Schools	
Belhar ext.16	6	30	Community Park	Sub-district 6: Greater Belbar & Delft
	Ŭ		Primary Schools	

Table 4: 2020 Top areas of Need in Tygerberg district

		Secondary Schools	
		Neighbourhood	
		Parks	
*The colour in the boxes represer	ts the number of	facilities required as a re	sult of the modelling exercise. The results from
the modelling exercise are indice	ative of the sever	ity of facility need. As su	ch it is not expected that the results from the
modelling exercise must be prov	ided. In addition	to fiscal and land avail	ability constraints results should be read with
the understanding that it is up to	line departments	s to devise a strategy on	how to meet the need identified.
3-5 Facilities required =Orange			
5+ facilities required=Red			
1-2 Facilities required =Yellow			

An integrated planning approach needs to be adopted when planning and developing future community facilities adopting the principle of clustering and co-location. New facilities should be developed in clusters located in close proximity to public transport in pursuit of TOD principles to ensure the development of integrated human settlements. Owing to the pressure for land and development in this district, areas of need should be prioritized and state owned land leveraged. Table 5 below lists pipeline projects in the Tygerberg district.

Table 5: Pipeline/proposed projects for public facilities

Facility type	Pipeline projects		Time frame Short/Medium/Future
	New/replacement	Upgrade/expansion	
Community	Delft Community		Future
Centres	Center		
Libraries		Delft Library	Short-Medium
City Health		Delft South Clinic	Medium
		Uitsig Clinic	Short-Medium
		Sarepta Clinic	Medium-Future
		Bothasig CDC	Short–Medium
		Vanguard	Medium
	Ravensmead CDC		Short
	Belhar CDC		Future
	Elsies river CHC		Short-Medium
	Tygerberg Hospital replacement(PPP)		Medium
	Tygerberg Regional Hospital - new		Medium
Sports	Delft Integrated		Short-Medium
	Recreation Facility		
		Bellville Integrated	Short-Medium
		Recreation Facility	
		Bellville Pool	Short

1.2.5.1 Educational facilities

The WCED is responsible for provision of education facilities and base their needs on 'Equitable Access to Education'. The following area-based priorities have been identified:

Medium-Term Need (3-5 year)

Jagtershof: The construction of a primary and high school was dependent on the unlocking of land through the roads infrastructure programme. In response to the timing of the new road infrastructure as confirmed by the City's Transport Department, the construction of a new primary school within the next 3-5 years is anticipated.

Long-Term Need (5 year+)

Jagtershof: Commitment is to first construct a primary school with the area expecting to receive a high school over time.

Belhar: Consideration to be given to the impact new housing development will have on existing schools especially in the eastern part of Belhar (adjacent to the R300).

WCED Pipeline projects		Time frame Short/Medium/Future
New(N)/replacement(R)	Expansion(E)/Upgrade(U)	
Jagtershof PS(N)		Medium
Jagtershof SS(N)		Medium
	Edgemead SS(E)	Short
Winsley PS/Bellville Suid PS (R)		Medium
Uitsig PS(R)		Medium
	Vorentoe PS(U)	Medium
	Fairburn College(E)	Short
Sunray PS(R)		Short

Table 6: Education pipeline projects

1.2.6 Urban management areas

Various city programmes exist that support/assist with urban regeneration by improving and upgrading areas in terms of the supplementation of municipal services(refer to available mechanisms under Section 1.6 – Implementation Mechanisms). The section below will highlight two existing programmes and the areas covered by these:

1.2.6.1 City Improvement Districts (CIDs)

These districts are established by communities in partnership with the city and have defined boundaries. They are funded from additional property rates levied on the municipal valuation of the property owners which is paid over to the CID and used to provide the additional services they provide. CIDs (established by communities) in Tygerberg district are as follows:

- Airport Industria CID
- Parow Industria CID
- Elsies River CID
- Boston

1.2.6.2 Mayoral Urban Regeneration Programme – Mayor's Visible Service Accelerated Programme (MURP – MVSA)

The MVSA programme relies on the collective efforts made by various line departments in order to target neighbourhood level precincts for regeneration through community building interventions.

- Delft (Safety and Security; Energy)
- Kuils River (Safety and Security; Energy; Community Services and Health)
- Bellville CBD (Safety and Security; Urban Management; Transport; Energy; Community Services and Health)
- Bishop Lavis (Safety and Security; Energy; Community Services and Health)
- Bonteheuwel (Safety and Security; Urban Management; Energy; Community Services and Health)
- Goodwood CBD (Safety and Security; Energy; Community Services and Health)
- Parow CBD (Safety and Security; Energy; Community Services and Health)
- Uitsig (Safety and Security; Urban Management; Energy; Community Services and Health)



Figure 4: Urban restructuring and upgrading

1.3 Spatial targeting framework for prioritising areas for public investment

The purpose of the spatial targeting framework is to identify and prioritise specific areas within the district for public investment. Areas are prioritised based on various informants related to the City's key spatial transformational themes, strategies and policy elements at the metropolitan, sub-metropolitan and district scales. The informants, each of which are detailed below, aim to emphasise the key components of the various strategies relevant to identifying and selecting areas in which to prioritise public investment, which are depicted in Figure 5.



Figure 5: Link between spatial themes, strategies, scale and policy elements

Figure 5 depicts the various elements that inform the spatial-targeted areas (STAs) per scale of planning. The key informants at the highest (metropolitan) level of planning are the STAs adopted by the MSDF, which form the basis for prioritisation of public investment and incentives. These have been refined and delineated through the DSDF review. At the sub-metro level, the structural elements that are key areas of investment-focus and strategic development potential are the City's nodes and development corridors. These have been informed by the structuring corridors in the MSDF and the City's approved integration zones. Lastly, at the lowest scale of planning, greater attention is placed on district and local elements that should inform and direct public investment decisions in order to implement the spatial vision and objectives reflected in the DSDF plan. These

are categorised broadly as opportunity areas and vulnerable areas and are described in more detail in the sections that follow.



1.3.1 Overview of priority area identification

At the local scale of planning, new spatial designations, the priority local areas, have been delineated to inform and direct public investment decisions in order to implement the spatial vision and objectives reflected in the integrated DSDF and EMF. These are broadly divided into Opportunity Areas and Vulnerable Areas.

Each of these categories are made up of specific spatially defined areas. These include Development Focus Areas (DFAs), ECAMP Areas, Urban Support Areas (USAs) as well as Environmental Focus Areas (EFAs). The identification and rationale behind these areas is discussed below:

1.3.1.1 Vulnerable areas

The vulnerable areas are delineated through the Urban Support Area designation. These are areas that are faced with a combination of challenges including but not limited to infrastructure failure and service delivery challenges, high socio-economic need and a need for coordination among projects, programmes and stakeholders. The Urban Support Area designation aims to identify areas that need support over and above the regular processes available. These challenges are increased as a result of some of the following elements/characteristics:

- informality and overlapping challenges;
- high socio-economic vulnerability;
- standard norms, guidelines and processes may be incongruous with the contextual realities;
- the area is in need of public investment but not necessarily strategically located; and
- there may be plans for the area but implementation is lacking.

The layered analysis aims to assist in the identification of Urban Support Areas by highlighting areas characterised by:

- high socio-economic need/vulnerability (SEVI 2020);
 - WPG Socio-Economic Vulnerability Index
 - Informality <u>high density in informal settlements and backyard shacks</u>
 - Density household and population densities per km^2
 - Poverty: income-based segmented classification (NLIs), which <u>classifies</u> <u>areas according to their income and various lifestyle characteristics</u>
 - Crime Levels (SAPS 2019/20)
- infrastructure failure and service delivery challenges (MTIFF, 2015 supplemented with District Level Baseline information)
- areas with a need for greater coordination (Qualitative Input from District Planner)

A more detailed description of the method to identify USAs can be found in Vol. 4: List of Technical Annexures.

Types of public investment: Housing; Public Facilities; Transport; Infrastructure; Urban Management; Securitisation of Land

1.3.1.2 Opportunity areas

The Development Focus Areas identified in each of the districts are a refinement of the Urban Inner Core to areas of 'development focus' or priority, i.e. Development Focus Areas for the period of the integrated DSDF and EMF (10-year cycle). These are targeted areas for urban restructuring that have the highest potential spatial transformative impact (i.e. addressing issues of spatial fragmentation, inefficient urban form and segregation by integrating communities and increasing opportunities to a greater number of people in highly connected areas) where dedicated budget, planning or investment is and should be prioritised to facilitate development.

Informants included in the layered analysis are the:

A. Development focus areas

- Targeted areas for urban restructuring that have the highest potential spatial transformative impact (i.e. addressing issues of spatial fragmentation, inefficient urban form and segregation by integrating communities and increasing opportunities to a greater number of people in highly connected areas)
- Areas linked to projects with a multi-sectoral focus where there is funding available (be it operational and/or capital), or funding to be applied for, for planning that will give rise to implementation (i.e. LASDFs, Precinct Plans, etc.).
 - Priority Areas of Opportunity as identified in CLDP and Integration Zones that would serve as catalysts to unlock the potential for integrated development with cross-cutting benefits, e.g. Bellville PTI, Philippi East
 - Other high profile integrated projects under investigation
- Planning work should at least commence within the lifespan of the integrated DSDF and EMF.
- Areas considered highly accessible in line with the City's MSDF and TOD objectives.
- Potential to attract private sector investment.

B. Economic Areas Management (ECAMP) Areas (ECAMP, 2017)

• Business precincts with high locational potential that require infrastructure or public investment to catalyse said potential.

A more detailed description of the method to identify DFAs can be found in Vol. 4: List of Technical Annexures.

Types of public investment: Urban Management; Public Facilities; Infrastructure; Transport; Securitisation of Land

1.3.1.3 Environmental prioritisation

Environmental Prioritisation forms a third component of this spatial targeting framework. The aim hereof is to consider of the role of environmental resources in terms of its contribution toward enhancing the economic potential and social amenity value of areas whilst improving the City's resilience in the face of climate change and other threats, particularly in more vulnerable areas and/or communities. Balancing the pressures of urbanisation and environmental management requires prioritising the management of environmental resources as part of a more integrated approach to climate change adaptation and adapting urban development in order to promote more efficient use of resources and reduce the impacts of urban development on the environment. As part of an exercise to identify and prioritise environmental focus areas, a set of criteria was used to select environmental projects and programmes which are/or have:

- 1. Catalysts for integrated development with cross-cutting benefits -
 - Supports environmental priorities as well as enhance the economic potential and social amenity of the area.
 - Reduce biophysical risk to communities
 - Areas under threat from urban development
- 2. Funding, Planning or Investment within the 3 year MTREF period or planning for funding/ in process or to be applied for within the 5-10 year IDP and integrated DSDF and EMF lifespan.
- 3. Priority Area Alignment (i.e. DFAs, USAs, Destination Places or new EFAs based on options provide).

The final selection of projects which informs the identification of Environmental Focus Areas is based on there being evidence of all 3 abovementioned criteria. Please refer to Table 8 for further details on the EFAs.



Figure 7: Spatial targeting framework - priority areas

1.3.2 Capital investment prioritisation

Based on the priority local areas identified above, a prioritised list of significant public capital investment to support the spatial development proposals of the integrated DSDF and EMF, and mores specifically the development of these targeted areas can be developed.

It should be noted that capital investment will occur across the district on a range of public facilities, infrastructure and services (roads, bulk services, etc.). The focus on the capital investment prioritisation in the district is thus not comprehensive, but strategic, focusing on areas where multi-sectoral intervention is needed to ensure high impact restructuring and upgrading within the district.

Table 7 below identifies key, high impact projects that will have a significant impact at a district scale while Table 8 identifies specific local level projects that support the spatial planning proposals for the priority local areas in the district.

Table 7: District prioritisation

Project	Description	Timeframe (S: 1–2yr, M: 2–5yr, M/L: 5+yr)
Bellville CBD	See Table 8 below Catalytic precinct planning Integrated recreation facility	M/L: 5+yr
CTIA	See Table 8 below	M: 2–5yr

* Cross-district: projects that have a wider impact catchment area across district boundaries

Table 8: Sub-distric	t prioritisation	per DSDF	Priority	Local Area	

Priority area	Project	Description	Timeframe S: 1–2yr, M: 2–5yr, M/L: 5+yr
1.3.2.1 Vulne	erable areas		
Kalkfontein Informal Settlement	Kalkfontein UISP	Upgrading of informal settlement.	М
Delft	Various housing projects	Various housing projects are in the pipeline, inclusive of the area along Symphony Way, which forms part of the development with ACSA. Further to this the development of mixed use medium density residential complexes with street facing ground floor retail are also being investigated. Further investigation is underway for development of underutilised City owned land within the Delft Main Road corridor in partnership with private investors.	M/L

	Various community facilities	New community centre New integrated recreation facility Maintenance/upgrading of park recreational facilities at Mandela Peace Park. Upgrading library and Delft South clinic	
	Voorbrug sports ground	Upgrade of the sports ground to accommodate diverse codes, including fencing and improvement to existing club-house facilities.	Μ
	Voorbrug Precinct	Create a District level park for Delft that also serves a connecting function between the existing facilities (Library, Hall, Swimming Pool & Sports fields).	Μ
	Informal Trader Infrastructure	Extend street trader plan with designated trader bays on the Delft Main Road Corridor and on City own land. Provide formal trading structures in high trading volume sites along the Delft Main Road Corridor, including Sibanye Square and the Hindle / Main Road intersection.	Μ
	Taxi Interchange	Develop a taxi interchange, upgrading the informal site at corner of Delft Main Road and Symphony Way, for passengers from Philippi and Mitchells Plain to connect to Belville. The interchange should accommodate use-use with retail and service businesses.	Μ
Bonteheuwel	BNG housing	Infill housing development	М
	MVSA programme	Town centre regeneration to serve as a catalyst for development in the suburb.	Μ
1.3.2.2 Oppo	ortunity areas		
Bellville/ Tyger Valley	Bellville CBD and surrounds (PTI upgrade, Future BRT, Integrated recreational facility, etc.) Proposed	Potential for intensification, redevelopment and upgrade. The Bellville CBD Catalytic Precinct Project (draft 2020) forms the base for the redevelopment of the Bellville PTI and immediate surrounds, and provides guidance to the future role and function of inter alia Durban Road (south of N1) as well as the extension of Robert Sobukwe Road as future BRT-trunk route. Further precinct planning is required for the area to the north of Voortrekker Road to address redevelopment between Durban Road and the extended Robert Sobukwe Road as BRT-trunk route, accessibility, potential bulk, interfaces, preferred land use mix. Investigation into the identification of areas	M/L M
	heritage exemptions	along the Voortrekker road corridor where application for heritage exemption would be feasible.	
Elsies River Industria	Mixed-use and higher density residential	Area around the station provides opportunity for redevelopment to mixed-use, including more affordable housing. Four sites have been	M/L

		identified as part of the Parow Prioritised Local Areas Social Housing Programme. Further	
		investigation would be required to ensure	
		appropriate interfaces between industrial and	
		residential/commercial uses.	
De Grendel	Redevelopment	Pre-feasibility studies to investigate the	М
precinct	of Parow Golf	redevelopment opportunities of the Parow Golf	
	Course	Course which is linked to the Tygerdal drop-off	
		site, N1 City commercial node and Jan Burger	
		sport complex as part of the wider De Grendel	
		precinct.	
Airport	 ACSA mixed- 	Opportunity for infill mixed-use (commercial and	M/L
Industria	USE	industrial) development on the northern	
	development	boundary. Proposed residential along Symphony	
	 Symphony 	Way to support the relocation of informal	
	Way BRT	settlements of Malawi Camp and Freedom Farm.	
		Proposed BRT along Symphony Wat to link with	
		Bellville metropolitan node.	
1.3.2.3 Enviro	onmental priority	areas	
CTIA	Symphony Way	Confirmation of Symphony Way conservation	М
	conservation	Area as per the Strandveld CIP and finalisation of	
	area	partnership with ACSA.	
Haasendal	Haasendal	Ensure conservation of the biodiversity and ricer	M/L
	Conservation	corridor and interface between urban and	
	Area	natural environment. Gateway are from	
		Stellenbosch municipality into City of Cape Town.	
Tygerberg	Upgrading	Upgrading of the visitor facilities .	Μ
Nature			
Reserve			

NOTE: Final project selection is dependent on a number of detailed economic, financial and operational assessments to be determined by the City's Infrastructure Strategy.

1.4 Local area planning priorities

While the integrated DSDF and EMF gives direction at a district scale, Local Area Planning Initiatives such as Local Spatial Development Frameworks (LSDFs), Precinct Plans and Public Investment Frameworks (PIFs) are required to provide a greater level of planning direction in strategic locations and stronger focus on implementation. Several priority local planning and investment areas are identified in order to implement the vision of the integrated DSDF and EMF. Inputs from the public engagement process have been an essential part of this process. These inputs have been balanced with the need to be strategic in focussing on projects with maximum impact and highest alignment with the spatial strategies of the MSDF (2018) and the new integrated DSDF and EMF through the spatial targeted areas (opportunity and vulnerable areas) in section 1.3 and programmed with due regard for resources available to undertake projects.

Based on the technical review and inputs to date, several planning and investment focus areas have been identified, including preliminary local planning areas where further planning is required to guide local land use change or define capital investment interventions or where further work is needed to unlock strategic land for development. The priority local area planning initiatives for the Tygerberg district are detailed in the following table.

PLAN	DESCRIPTION AND MOTIVATION	PLANNING PRODUCT	STATUS	TIMEFRAM E (S: 1–2YR; M: 2–5YR; M/L: 5+YR)	LEAD DEPARTMENT
Bellville PTI	Description: Future Bellville	lSDF	In	M: 2 – 5	Urban
ana surrounds	(Urban Catalytic Investment		progress	yr	Investments
	to planning projects for the	NATION CARES THE REAL			
	different identified precincts	1.11	COVE-STEL	1 hour	
	in the core area.	同時の人		Juny	11-1
	Planning of extended Robert	T	Charles .	COMP.	
	Sobukwe Road and re-	Pilling of	Mar J	101	- Kal
	aligned Durban Road (urban	CALLE .		L	Contraction of the state
	(Development Focus Area):	Contraction of the	Service and	13.11	3
	Provide input with regard to			and in the	
	land use guidelines when	San March		All and a second	
	access management is			and the second sec	and the second
	between Robert Sobukwe	Liver I	1 TUNES	V. Staring	
	extension and re-aligned				
	Durban Road(dependent on				
	approval of study/USDG-				
	funding application).				
	Consideration to be given to				

Table 9: Local area planning initiatives

De Grendel	the compilation of development guidelines re. land uses, height of buildings, bulk, interfaces, etc. Motivation: There is a need for precinct-level coordination and integration of various multi- sectoral projects that maximise the area's competitive local economic advantage, including but not limited to Utilities, Transport infrastructure, Community and Health Services, e.g. PTI upgrade. Local-level development proposals are subject to the implementation and feasibility of these projects that require more detailed studies and investigation to be undertaken as part of the CLDP Bellville Priority Plan. Description: Pre-feasibility study	Precinct		M: 2 - 5	Metro Spatial
Precinct (Parow Golf Course)	for De Grendel station precinct (Development Focus Area): Co-operate with and giving planning input to investigation, to be led by Metro Spatial Targeting (dependent on the approval of study/USDG- funding application).	Plan	progress	yr	Planning & Growth Managemen t
	Motivation: Need for precinct- level planning for formulation of development scenarios of the Parow Golf Course which forms part of a larger district node including the Tygerdal waste site, N1 City commercial node, PGC and the Jan Burger sport complex. TOD principles will be a key element to be addressed in the proposals due to two rail stations and future BRT route located within the precinct. Opportunity for spatial transformation with mixed land uses, including a range of housing typologies.				
Deltt Main Road Corridor	Description: A Delft Main Road Public Investment Framework was completed in	Precinct Plan	Scoping	M: 2 – 5 yr	





Figure 8: Prioritised Local Areas

1.5 Local policies to be withdrawn or amended

Applicable/approved policies recommended to be withdrawn in association with the approval of the revised Tygerberg integrated DSDF and EMF include the following:

Policies to be withdrawn

The following section includes a list of approved local level policies and plans that should be withdrawn or amended to ensure alignment with the new Tygerberg integrated DSDF and EMF, once approved. The specific motivation for withdrawal or amendments are describe in the tables below.

Table 10: Policies to be withdrawn

Policy or plan	Motivation
Wingfield Place Triangle Policy	Area identified as part of mixed-use intensification located
Plan (2002)	along Monte Vista Boulevard. The majority of properties have
	already been rezoned to local business, hence there is no
	need for further development guidelines. Guidelines for
	remaining properties to be rezoned will be absorbed into the
	sub-district guidelines in the integrated DSDF and EMF. More
	specific development rules to be regulated in terms of the
	DMS in MPBL.

Table 11: Policies to be amended/updated

Policy or plan	Motivation and description of key amendments
Boston Beleidsplan (1998)	To be updated, if required. Further discussion with Land Use
	Management required.

1.6 Implementation mechanisms

A parallel investigation was undertaken during the review of the integrated DSDF and EMF to identify current and required development mechanisms to support its implementation. The main objectives of said process were as follows:

- Identify pragmatic mechanisms that can be implemented within the lifespan of integrated DSDF and EMF and support the recovery of the city's economy during and after the Covid-19 pandemic.
- To develop a framework to guide the application of the mechanisms at the subdistrict and local scale.

This section provides a summary of the findings from the aforementioned investigative process and provides a kit of incentives or tools to stimulate the desired type and form of development proposed in district and sub-district development plans. This will provide a level of certainty and direction to development agents and landowners and reinforce the City's commitment to drive the spatial vison and development proposals contained within the integrated DSDF and EMFs.

1.6.1 Categorisation of mechanisms

Each mechanism is categorised in terms of its primary objective in supporting the spatial vision and development proposals in line with the integrated DSDF and EMF. While some may have more than one function, this categorisation focuses on their primary objective. The four categories of mechanisms are described below.

1.6.1.1 Development incentives

Development incentive mechanisms aim to stimulate private sector development and leverage public investment. They are designed to change the behaviour of agents of the development process or influence their decisions in order to achieve specific outcomes. Incentives must be restricted to agents who meet given criteria, such as locating in a TOD precinct and meeting the desired form and composition of land use. Standard incentive packages can involve financial rewards such as discounts, leveraging of City's property assets, rebates, tax holidays and subsidies, or they may involve non-financial inducements in the form of exemptions from certain regulation or reporting standards.

1.6.1.2 Income generation

Income generation mechanisms enable the City to recover some or all of the value that public infrastructure generates for the private sector and ensure that it retains the maximum value of its assets when leased or disposed to the private sector. The revenue or income generated by these mechanisms can be used to fund the capital and operation cost of public investment projects required to support the spatial vision of the city. It should be noted that this does not exclusively deal with land based financing, rather mechanisms that have a primary objective of generating income to support the implementation of the City's spatial vision.

1.6.1.3 Institutional

Institutional mechanisms seek to harness the City's operational and legislative capacity as a means of improving the development process. A core facet of this is by identifying and leveraging operational efficiencies as means of improving the implementation of other mechanisms. Institutional mechanisms may also seek to improve vertical and horizontal coherence across government levels as spatial frameworks are aligned with both future and existing local policies, but also across government spheres. While these are typically undertaken within the internal realm of the City, there can be a degree of public-private interfacing, as is the case with mechanisms such as City Improvement Districts (CIDs). These are not typically revenue-generating or incentivised approaches.

1.6.1.4 Public sector investment

Public investment is a key driver of development within cities across South Africa. Beyond the constitutionally mandated basic services and public infrastructure provision, in certain circumstances, public sector investment is essential to attracting and leveraging the private sector and household investment and unlocking development opportunities in spaces that will contribute to a more efficient, equitable, sustainable and just spatial urban form. These mechanisms are particularly important in areas that face sustained challenges. No developer or investor will elect to build in an undesirable location unless it yields a profitable return on investment or is compensated for its underperformance. Programmes such as MURP and the Precinct Management Model aim to stabilise and address urban decay issues in specific local areas. The CLDP aims to leverage public investment in a long term, comprehensive regeneration process.

1.6.2 Available mechanisms

The following list of mechanisms are approved and available to prospective development agents and property owners in Cape Town. A more detailed description of the mechanism, including its main objective, how it works, qualification criteria and the application process can be found in Technical Annexure 12, contained in Vol. 4 of the integrated DSDF and EMF.

Table 12: Available mechanisms
Development incentives
Discounted development contributions
Development application fee waivers
Discounted electricity tariffs
PT Zones (current not operational, is expected to undergo public participation from 29 October
2021 – 22 January 2022.
Urban Development Zones (UDZs)
Income generation
Development contributions
Land disposals and lease
Institutional
Streamlined land use application process
Special rating areas
Public sector investment

Catalytic Land Development Pipeline (CDLP)
Mayoral Urban Regeneration Programme (MURP)
Precinct management model
Land acquisition including land banking and assembly

1.6.3 Proposed mechanisms

The following list of mechanisms are either, currently in the process of development or investigation by the City or should be investigated in more detail prior to pursuit and implementation. It should be noted that this is not an exhaustive list of mechanisms; they were selected based on the methodology contained in Technical Annexure 12 in Vol. 4 of the integrated DSDF and EMF, and should not preclude the investigation of other mechanisms to support the City's urban development vision. A more detailed description of the mechanisms, including its main objective, how it works, qualification criteria and the application process (where applicable), can be found in Technical Annexure 12 in Vol. 4 of the integrated DSDF and EMF. Timeframes for approval (for mechanisms under current investigation) and investigation of future mechanisms are indicated as either A, B or C, where A refers to those mechanisms which can be approved in 1–2 years, B indicates those that can be approved in 2–5 years and those that are timeous to be investigated but can be done within the lifespan of the District Plans are noted as C, or 5–10 years.

Mechanism	Description	Timeframes: A: 1–2 years B: 2–5 years C: 10 Years
Development incentive	25	
Integrated Incentive Overlay Zone	A regulatory tool that refers to a zone, in addition to the base zoning, stipulating the purposes for which land may be used and the development rule which may be more or less restrictive than the base zoning.	A
Inclusionary housing	Inclusionary housing is one of many different kinds of housing delivery programmes. It is usually a government driven program to promote mixed- income housing delivery through regulations and/or incentives that require or encourage property developers to include a proportion of housing units for low and moderate-income households.	A

Table 13: Proposed mechanisms

Density bonus	A zoning tool that permits developers to increase height and/or bulk above those permitted in terms of the zoning scheme, in exchange for a public or social good. It is intended to compensate the developer with additional revenue from the sale of additional dwellings to make up for inclusion of below-market units or unprofitable amenities. This tool does not generate direct revenue. It is intended as an in-kind payment in exchange for the development of a public good.	A
Proactive rezoning/upzoning	Proactive rezoning is the process where a municipality, of its own accord, changes the existing zoning of land parcels in its jurisdiction. A municipality may do this for many reasons, but generally the aim is to encourage development in a specific area and/or to control the nature of that development	A
Heritage exemption areas	 Provide appropriate exemptions for spatially targeted areas, mainly New Development Areas (NDAs), from the regulations contained under the following sections of the National Heritage Resources Act (NHRA): Section 34 (NHRA) Section 38 (NHRA) In addition to the exemption, this mechanism will also seek to refine new areas to be included in the current Heritage Protection Overlay Zone (HPOZ). 	В
Environmental exclusion areas	Provide appropriate exclusions from the National Environmental Management Act, Act 107 of 1998 (NEMA)for listed activities contained within spatially targeted areas, mainly NDAs, that would trigger a Basic Impact Assessment or Full Environmental Impact Assessment.	В
Land/urban redevelopment scheme	Involves landowners and developer joining together to form one co-operative entity that consolidates multiple land parcels into a single site for redevelopment. Local government modifies zoning codes and increases bulk to facilitate development.	С
Tax abatements (other than the UDZ)	A reduction or exemption from taxes granted by the government for a specific period, usually to encourage investment in locations with lower demand. Benefits of the tax abatement get passed onto subsequent owners who purchase the property, thereby incentivising end-users to relocate to an area that they may not otherwise locate in. It can be set up in designated neighbourhoods where the city is trying to incentivise development or on a project-by-project basis if that project advances certain policy goals, e.g. job creation.	С
Income generation		

Land readjustment scheme	Landowners pool their land together for reconfiguration and contribute a portion of their land for sale to raise funds to partially fund public infrastructure costs. Can be undertaken by either public or private entity.	С				
Institutional						
Streamlined land use application process for priority areas	Unified and streamlined land development processes where proposals and applications supportive of TOD (density, intensity, design and location) are fast- tracked and development and investment are valued within the parameters of the City's stated transformation objectives. Typically require major investment into infrastructure.	В				
Enhanced process of land release and acquisition	A consolidated approach to the management of land which will be acquired and released by the City. This approach should take into account the strategic development potential of land parcels to ensure the best and most efficient use of land, taking into account its size, locational potential and applicable risk categories.	A				
Public sector investment						
Aligned public sector plans	Sector Planning is intended to ensure that the City prepares bankable, viable and appropriate capital public investment pipelines to meet the City's future growth, which is aligned to the City 2040 Land Use Model and District Spatial Development Framework.	A				

1.6.4 Local Application Framework

The following diagram describes the process and method to apply future mechanisms and extend current mechanisms to spatially targeted areas in the district to enable its spatial vision and address a particular development challenge in said targeted area. This is informed by key opportunities and constraints identified through the integrated DSDF and EMF baseline analysis and the detailed analysis of each mechanism located in Technical Annexure 12 in Vol. 4 of the integrated DSDF and EMF. This should be applied to all eight district and associated sub-districts to identify a suite of mechanisms to support the implementation of the integrated DSDF and EMF – some of which has be done in section 1.6.6 . A detailed description of the method can be found in Technical Annexure 12 in Vol. 4 of the integrated DSDF and EMF.



Figure 9: Methodology for applying mechanisms

1.6.5 Spatially targeting (review of ECAMP)

The city is currently in the process of reviewing ECAMP (Economic Areas Management Programme). ECAMP is a research and policy support initiative that tracks and routinely assesses the market performance and long-term growth potential of over 70 business precincts across the metropolitan region; on this basis, local interventions are identified which help ensure that each business precinct performs optimally given its particular locational assets. The **development performance** indicator reflects the current level of market confidence in an area by measuring short-term price signals (i.e. sales, building work, rentals and rental growth, vacancies, etc.). **Location potential** indicator measures the extent to which the precinct is aligned to the medium- to long-term location requirements of the City's business sectors (i.e. agglomeration, land supply, crime and grime, proximity and infrastructure). ECAMP will be used to supplement and verify steps 5 and 6 in the methodology described above, and provide the evidence base for pursuing the implementation mechanisms described in this report.

1.6.6 Mechanisms underway / for investigation in the Tygerberg district

1.6.6.1 Environmental exclusions

The purpose of the Environmental Exclusionary Areas (EEA) mechanism is to provide for the appropriate exclusion from National Environmental Management Act (NEMA) listed activities and the requirement to obtain an Environmental Authorisation in New Development Areas (NDAs) and Development Focus Areas (DFAs) identified by the Land Use Model and Revised District Spatial Development Framework.

At present, Atlantis has been identified as an exclusionary area, for which a legislated Environmental instrument is proposed in order to exclude the area from the requirement to obtain environmental authorisation. Other potential EEA areas have been identified which require further investigation and will be subject to a separate process, if found to be worth excluding.

In addition, the NEMA Environmental Impact Regulations (2014, as amended), makes provision for the adoption of a NEMA Urban Area, by the Competent Authority (i.e. Department of Environmental Affairs and Development Planning). The main reason for this provision is to enable certain of the Environmental Impact Assessment (EIA) Regulations listed activities within urban areas taking place, without the requirement to obtain environmental authorisation – and thus facilitate the provision of infrastructure and services. As such, it is important to note that the NEMA Urban Area serves a different purpose to the Urban Edge typically delineated in spatial development frameworks. Please refer to Technical Annexure 9 in Vol. 4 of the integrated DSDF and EMF.

1.6.6.2 Heritage exemptions

Legislated Heritage Exemption Areas (HEA) have also been identified as a mechanism with the potential to streamline and reduce the requirements for heritage assessments and authorisations as part of development application approval process (i.e. Heritage Impact Assessments (HIA)), reduce timeframes for approvals and contribute towards reducing the cost of doing business in the City of Cape Town. The focus of this investigation is on obtaining legislative exemption from section 34 and 38 of the Heritage trigger activities, of the National Heritage Resources Act, Act 25 of 1999.

At present, the following areas in the Tygerberg district have been identified for investigation as HEA as depicted in the map below:

- Portions of Goodwood and Parow
- Ruyterwacht
- Greater Elsies river
- Boston/Oakdale
- Matroosfontein, and
- Portion of Bishop Lavis



Figure 10: Exclusions and exemptions

1.6.6.3 Investment Incentives

The City's approved Investment and Incentive Policy provides the following incentives for targeted industrial nodes with clear potential for economic growth but which is currently underperforming/lagging and select tertiary sectors (more detail on these incentives can be found in Technical Annexure 12 in Vol. 4 of the integrated DSDF and EMF).

- Expedited Land Use Approvals
- Discounted and Deferred DC Payments
- Waiving of Development Application Fees
- Reduced Electricity Tariffs

Manufacturing within six defined industrial geographic areas depicted in Figure 12(Atlantis Industria, Triangle Farm, Parow Industria, Sacks Circle, Landsdowne Industrial (known as Philippi North in ECAMP) and Elsies River) are eligible for the aforementioned incentives. This includes the broad manufacturing sector OR priority manufacturing sectors being:

- Agro-processing
- Green technology
- Electronics and electrical engineering
- Clothing and textiles.

Priority tertiary sector industries are also eligible and are defined by the City's economic research and strategic documents including the Integrated Development Plan, the Social Development Strategy, the Inclusive Economic Growth Strategy and Project Camissa. These industries include:

- o Business Process Outsourcing (BPO),
- o Information and Communication Technology (ICT),
- o Tourism,
- o Film Industry.

1.6.6.4 PT Zones

PT1 and PT2 zones (short for public transport zones) offer reduced off-street parking requirements for developments in areas already well-served by public transport, in order to encourage the reduction in the number of private transport trips generated to and from that area, as well as to encourage the intensification of land development on the relevant erven. Those that were previously place and new PT zones proposed are depicted in Figure 12. It is important to note that they are currently not operational and is anticipated to undergo public participation from 29 October 2021 – 22 January 2022.

1.6.6.5 Overlay Zones

Integrated Incentive Overlay Zone for DFAs

The intent of the integrated (incentive) overlay zone is to allow for desired densities and types of development in certain areas of the city designated as appropriate in the City's DSDFs. This will be achieved through the establishment of clear development parameters linked to concessions in the development management scheme, which will in turn remove onerous administrative requirements that create uncertainty and often hinder development in spatially aligned areas, mainly the DFAs.

Heritage Protective Overlay Zones (HPOZ)

The heritage grading and associated development guidelines for each of the areas are to be determined through further investigation and planning. This will take into account the need to balance urban intensification with built conservation.

Small Scale Rental Unit Overlay Zone (SSRU Overlay Zone)

The intention of this overlay zone is to facilitate the development of SSRUs on land zoned Single Residential 1 and 2, over and above the additional third dwelling unit prescribed in the Municipal Planning By-Law. This proposed overlay zone also aims to improve the turnaround time of processing development applications for SSRUs and will provide development parameters and guidelines which facilitate this type of development in a safe and sustainable manner.

1.6.6.6 Inclusionary Housing

The City is currently in the process of developing an Inclusionary Housing Policy, which is a key deliverable of the 2021 approved CCT Human Settlements Strategy to help stimulate the provision of affordable housing by the private sector. Potential areas in close proximity to public transport, public amenities and employment opportunities (such as nodes, corridors and mix use development and/or intensification areas) should be considered for inclusionary housing.



Figure 11: Incentives

2 Monitoring and evaluations framework

The integrated DSDF and EMF's key purpose is to **provide policy direction** for the **location**, **nature and form of development** in each district and **guide land use and environmental decisions.** It is proposed that these aspects of development are to be monitored and evaluated in order to assess progress toward achieving the desired end state of Cape Town becoming a more spatially integrated and inclusive city.

The focus of the proposed DSDF Monitoring and Evaluation (M&E) framework will therefore be on measuring progress in terms of restructuring the abovementioned aspects of the built environment. A further component of the proposed M&E framework pertains to process-related aspects of policy implementation, in terms of the integrated DSDF and EMFs.



Figure 12: Focus of DSDF M&E Framework

The following section details the DSDF M&E Framework as a component of the Urban Planning & Design department's overarching Framework for Spatial Data and M&E.

2.1 UP&D FRAMEWORK FOR SPATIAL DATA AND M&E: AN OVERVIEW

The DSDF M&E Framework is an output based off three interrelated components of the Urban Planning and Design's departmental overarching Framework for Spatial Data and M&E as illustrated in Figure 13.

 Spatial Data and Indicator Framework – the primary component and output, comprising of a core set of indicators, based on available data, to enable meaningful spatial trend analysis across various spatial units of analysis. The Spatial Data and Indicator Framework has been embedded into the M&E Framework and provides the core indicators to be monitored

- 2. Framework for M&E A framework has been developed which is underpinned by the three key spatial strategies of the City's SDFs with the main objective of guiding where and what development is appropriate. The core set of indicators developed as part of the abovementioned SD&IF will be monitored to determine the type, form and location of development in relation to the DSDF objectives.
- 3. Performance Management cognisance was taken of the department's performance management requirements.



Figure 13: Overview of the UPD Spatial Data & M&E framework

The components of the Framework for M&E that have been applied to the DSDF are detailed below:

2.2 MONITORING

Within the context of spatial planning, performance indicators describe the extent to which a policy is achieving its aims and objectives. Best practice suggests that a well-formulated indicator framework (which is informed by a Theory of Change) should form the basis for effective M&E.

In order to answer the question, 'what is happening?' monitoring involves collecting, analysing and reporting on datasets. Core indicators have been identified and developed in terms of the SDF objectives (i.e. type of development, urban form and location):

- Urban development intensification (densification and diversification)
- Spatial Location of public investment (completion and spatial spread of public projects)
- Urban extent (urban footprint and urban edge)
- Protection of natural assets (Bionet and agriculture)

To assist with M&E at a district level, various control areas will be identified and defined. These area boundaries and are selected to monitor and assess specific aspects related to the District SDF.

2.3 EVALUATION

The evaluation and assessment component attempts to provide answers to the questions, 'why have the changes happened?' and 'are we doing the right thing?'

Spatial trends analysis requires longer-term time series to be meaningful and assess if the spatial policy is influencing urban development. For purposes of assessing why certain spatial trends are occurring in terms of the indicators monitored, undertaking a process of evaluation every five years is proposed, as part of a DSDF review.

Broader indicators that assist in understanding the drivers of change are required to justify why spatial trends occur and why spatial policy is successful or unsuccessful in managing development in line with its policy objectives and associated guidelines.

As mentioned above, control areas will be identified within each of the planning districts to track datasets at the district scale, which may show localised variations from the metro spatial trends.

Spatially targeted areas in the DSDF where the trends monitored require further evaluation are to be determined and could include:

- Development Focus Areas
- Urban Support Areas
- Mixed Use Intensification Areas
- New Development Areas

2.4 REVIEW

Answers the question, 'so what? and what is the way forward?' The review component aims to identify the implications for the District SDF and provide recommendations in terms of future SDF reviews.

2.5 ACTION PLAN

The table below sets out key milestones/timeframes for M&E deliverables based on a proposed five-year review cycle (milestones for year 1 to 5).

Tasks		Timeline			
		Year 2	Year 3	Year 4	Year 5
Aim to set up agreements/commitments with relevant data custodians with regards to data requirements and consistent updates.					

Table 14: Key milestones for M&E deliverables

Undertake case studies, if more in-depth analysis is required based on any noteworthy patterns emerging from the tracking of data.			
Compile comprehensive DSDF trends profile and relevant recommendations to inform review of future DSDFs.			
Start review and refine M&E framework for next five-year cycle.			