Strategic Biodiversity Offset Framework Plan Aalwyndal, Mossel Bay, Western Cape

REPORT 5: Management and Financial Arrangements for Biodiversity Offsets

Western Cape Government
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confluent

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The plan was compiled by Confluent and Eco-Pulse in consultation with the Mossel Bay Municipality, Cape Nature, and the Department of Environmental Affairs and Development Planning.

Project Manager

Cindy Rose (Western Cape Government: Economic Development and Tourism).

Project Leaders

Dr. Jackie Dabrowski (Confluent) and Douglas MacFarlane (Eco-Pulse).

Lead Authors

Dr. Jackie Dabrowski (Confluent), Douglas MacFarlane (Eco-Pulse), Dr. James Dabrowski (Confluent), Bianke Fouche (Confluent), Monica Leitner (Confluent), Kim Daniels (Confluent).

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Report Series Information

This report (in bold) is one of a series of reports produced for this framework plan which are listed below:

1. *Revision of the Aalwyndal Precinct Layout.*
2. *Calculated Size and Characteristics of the Offset.*
3. *Costed Conservation Management Plan for the Onsite Biodiversity Offset.*
4. *Identification, Ground-truthing and Feasibility of Potential Offsite Offsets.*
5. ***Management and Financial Arrangements for Biodiversity Offsets.***

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GLOSSARY

Biodiversity	The variability among living organisms from all sources including, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part and also includes diversity within species, between species, and of ecosystems.
Biodiversity Offset	The measurable outcome of compliance with a formal requirement contained in an environmental authorisation to implement an intervention that has the purpose of counterbalancing the residual negative impacts of an activity, or activities, on biodiversity, through increased protection and appropriate management, after every effort has been made to avoid and minimise impacts and rehabilitate affected areas.
Biodiversity Offset Implementation Agreement	Means a legally binding agreement that is entered into between the holder of an environmental authorisation and a third party, or third parties, for the implementation of a biodiversity offset.
Biodiversity Offset Management Plan	Means a plan setting out the management actions to be taken at a biodiversity offset site to achieve and maintain specific conservation outcomes in the long term.
Biodiversity Offset Receiving Area	Means an area identified in an official policy, plan or programme as an optimal area for locating biodiversity offsets.
Biodiversity Offset Report	Means a report prepared by a relevant specialist, or specialists, and submitted to a competent authority together with a basic assessment report, or environmental impact assessment report, setting out the findings of a biodiversity offset study.
Biodiversity Offset Site	Means a suitable area in the landscape which meets the offset requirements in an environmental authorisation and is secured for biodiversity conservation in the long term.
Biodiversity Priority Area	Means an area identified as a priority for biodiversity conservation in a spatial biodiversity plan, and includes Critical Biodiversity Areas, Ecological Support Areas, Freshwater Ecosystem Priority Areas and focus areas for protected area expansion.
Buffer	A strip of land surrounding a wetland or riparian area in which activities are controlled or restricted to reduce the impact of adjacent land uses on the wetland or riparian area. Buffers are land use specific and are calculated for the specific environmental context and proposed land use.
Candidate Biodiversity Offset Site	Means one of the potential biodiversity offset sites identified in a Biodiversity Offset Report.
Characteristics of a watercourse	Means the resource quality of watercourse within the extent of a watercourse.
City Improvement District	Defined geographic area where the majority of property owners agree to fund supplementary and complimentary services to those normally supplied by the Local Authority in order to maintain and manage the public environment at a superior level and thus maintain or increase their investment.
Delineation of a wetland or riparian habitat	Means delineation of wetlands and riparian habitat according to the methodology as contained in the Department of Water Affairs and Forestry, 2008 publication: A Practical Field Procedure for Delineation of Wetlands and Riparian Areas or amended version.
CBA Map	Means a map of Critical Biodiversity Areas and Ecological Support Areas, based on a systematic biodiversity plan.

Conservation Area	Means an area with a conservation designation that is effective at achieving in-situ conservation of biodiversity outside of protected areas in the long term.
Conservation Authority	Means South African National Parks or the organ of state responsible for the conservation of biodiversity in a province.
Conservation Servitude	Means a servitude registered against the title deed of a property placing restrictions on the landowner and successors-in-title for the purposes of conservation of biodiversity on the relevant property.
Critical Biodiversity Area (CBA)	Means an area that must be maintained in a good ecological condition (natural or near-natural state) in order to meet Biodiversity Targets for ecosystem types as well as for species and ecological processes that depend on natural or near natural habitat, that have not already been met in the protected area network.
Ecosystem	Means an assemblage of living organisms, the interactions between them and their physical environment.
Ecological Condition	Means the extent to which the composition, structure and function of an area or biodiversity feature has been modified from a reference condition of "natural".
Ecosystem Extent	Means the proportion of an ecosystem type that remains intact (i.e. in a natural, near-natural or semi-natural condition) relative to its historical distribution.
Ecological Infrastructure	Means naturally functioning ecosystems that deliver valuable services to people, such as water and climate regulation, soil formation and disaster risk reduction.
Ecosystem Services	Means services and benefits to people and the economy provided by ecosystems, often classified into three broad categories: provisioning services, regulating services and cultural services.
Ecosystem Threat Status	Means the indicator of how threatened an ecosystem type is (in other words the degree to which it is still intact or alternatively losing vital aspects of its function, structure or composition) in which Ecosystem types are categorised as Critically Endangered, Endangered, Vulnerable or Not Threatened, based on the proportion of ecosystem type that remains in good ecological condition relative to a series of biodiversity thresholds.
Fatal Flaw	Means a major defect or deficiency in a project proposal that should result in environmental authorisation being refused, and from a biodiversity perspective, a residual negative impact that would have a Very High significance rating.
Irreplaceable Biodiversity	Means biodiversity identified through a systematic conservation assessment as being essential to meet a biodiversity target.
Regulated area of a watercourse	a) The outer edge of the 1 in 100-year flood line or delineated riparian habitat, whichever is the greatest distance, measured from the middle of the watercourse of a river, spring, natural channel, dams and lakes. b) In the absence of a determined 1 in 100-year flood line or riparian area as contemplated in (a) above the area within 100m of distance from the edge of a watercourse where the edge of the watercourse (excluding floodplains) is the first identifiable annual bank fill flood bench. c) In respect of a wetland: a 500m radius around the delineated boundary (extent) of any wetland (including pans).

Rehabilitation	Means the process of reinstating natural ecological driving forces within part or whole of a degraded habitat to recover former or desired ecosystem structure, function, biotic composition, and associated ecosystem services.
Residual negative impacts	Means negative impacts that remain after the proponent has made all reasonable and practicable changes to the location, siting, scale, layout, technology and design of the proposed development, in consultation with the environmental assessment practitioner and specialists (including a biodiversity specialist), in order to avoid and minimise negative impacts, and/or rehabilitate any impacted areas within the prescribed timeframes specified for the completion of the rehabilitation in the EA.
Restoration	Means returning a disturbed, degraded or destroyed ecosystem to its natural condition, with the species present being representative of the ecosystem that occurred on the site prior to disturbance, and ecological processes supporting the long-term persistence of the ecosystem and species, and the associated ecosystem services, through active (with interventions) or passive (without interventions) means.
Spatial Biodiversity Plan	Means a spatial plan that identifies one or more categories of biodiversity priority area, using the principles and methods of systematic biodiversity planning.
Resource Quality	Of a watercourse means the quality of all the aspects of a water resource including: (a) The quantity, pattern, timing, water level and assurance of instream flow; (b) The water quality, including the physical, chemical and biological characteristics of the water; (c) The character and condition of the instream and riparian habitat, and; (d) The characteristics, condition and distribution of the aquatic biota.
Special Rating Area	Refers to a clearly defined geographical area approved by the municipality in which property owners can raise levies to fund ‘top up’ services for that specific area.

ABBREVIATIONS

BA	Basic Assessment	**FEPA**	Freshwater Ecosystem Priority Area
BOCMA	Breede-Olifants Catchment Management Authority	**I&AP**	Interested and Affected Part
CA	Competent Authority	**MEC**	Member of the Executive Council for the environment (provincial)
CBA	Critical Biodiversity Area	**MBM**	Mossel Bay Municipality
CID	City Improvement District	**NBA 2018**	National Biodiversity Assessment
CN	Cape Nature	**NBF**	National Biodiversity Framework
DFFE	Department of Forestry, Fisheries and Environment	**NDP**	National Development Plan
DEADP	Department of Environmental Affairs and Development Planning	**NEMA**	National Environmental Management Act (Act No. 107 of 1998)
EA	Environmental Authorisation	**NEMBA**	National Environmental Management: Biodiversity Act, 2004 (Act No. 10 of 2004)
EE	Ecosystem Extent	**NWA**	National Water Act (Act No. 36 of 1998)
EAP	Environmental Assessment Practitioner	**NGO**	Non-government organisation
EIA	Environmental Impact Assessment	**NPO**	Non-profit organisation
EMPr	Environmental Management Programme	**SCC**	Species of Conservation Concern
EPL	Ecosystem Protection Level	**SEI**	Site Ecological Importance
ESA	Ecological Support Area	**SRA**	Special Rating Area

1. INTRODUCTION

This report is the fifth in a series of reports compiled for the development of the Aalwyndal Strategic Biodiversity Offset Framework Plan. The report outlines the proposed institutional and financial arrangements to meet offset obligations associated with the Aalwyndal precinct. This is the final report in the series and follows on from the Report 4 in which candidate offsite offset areas were screened and selected based on their suitability.

It is important to note that the proposals presented here were informed by previous work undertaken by Brownlie and von Hase (2021; See Annexure 1). The initial concepts and ideas have however been refined in consultation with key stakeholders to strengthen financial estimates and implementation arrangements for the Aalwyndal precinct.

1.1 Terms of Reference

This report combines two specified deliverables from the original Terms of Reference provided by the Western Cape Department of Economic Development and Tourism (DEDAT).

The first part aims to **design the management arrangements for the offset bank**, and should include:

i. Final recommended financial and transactional arrangements (including offset cost recovery / funding from landowners and / or developers within Aalwyndal, including consideration those options already proposed in Brownlie & von Hase, 2021).
ii. Institutional arrangements for hosting, managing and spending the offset funds, as well as managing the offset bank for conservation, taking into account the relevant legal environment governing public finances and spending if necessary.
iii. A process for managing and documenting the drawdown on the offset bank as developers within Aalwyndal make use of the offset bank.
iv. Optimal method of securing the offset receiving areas for conservation in perpetuity, specifically also investigating alternatives to the Municipality purchasing the land (including developing a model offset agreement with landowners as noted above).

The second part aims to **provide a costing for implementation of the offset bank:**

Based on the outcomes of the offset receiving area sites assessment (section 4.2c), update the estimated cost to finance the implementation of the Strategic Biodiversity Offset Framework Plan offset bank based on the sites' condition, the method to be used to secure the offset bank in perpetuity, as well as the management requirements (initial cost estimates already captured in Brownlie & von Hase, (2021).

1.2 Key Principles and Guidelines

The principles and guidelines provided in the National Biodiversity Offset Guideline (NBOG, 2023) were used as an important reference point when defining arrangements for financing, securing and managing biodiversity offset sites. Those of particular relevance are outlined here.

1.2.1 Securing Biodiversity Offset Sites

A key principle is that "***Biodiversity offsets must result in long-term protection and management of priority biodiversity"***. In practice, this means that biodiversity offsets should contribute to the long-term security of biodiversity priority areas and maintain or improve their ecological condition, thereby resulting in tangible and measurable positive outcomes for biodiversity conservation 'on the ground'. Biodiversity-rich habitat that is in good ecological condition promotes human well-being in the long term.

A range of possible mechanisms can be used to secure selected biodiversity offset sites and are summarised as follows:

- Declaration of a Protected Area (PA) in terms of the National Environmental Management Protected Areas Act (NEMPAA) is the preferred option for securing a biodiversity offset site in perpetuity.
- If declaration of a PA is not feasible for any reason, then registration of the offset site as a conservation servitude is the next best option. This is generally more appropriate for on-site offset areas. A conservation servitude is a real right in the property of another that allows the beneficiary, usually a conservation authority or a conservation NPO/ PBO, certain circumscribed entitlements with regard to the conservation of biodiversity on another person's property. Conservation servitudes are binding on successors-of-title and are enforceable against the world at large (not only one person).
- Purchase credits from a recognised biodiversity offset bank established through an approved scheme. The purchase of credits must satisfy offset requirements such as sufficient quantity of the same ecosystem or habitat type.

Full implementation of any of these mechanisms is ideally complemented through the amendment of land use, town planning or zoning schemes to ensure alignment with spatial and landuse planning.

The timing of offset intervention is also important and, in this regard, "***Implementation of a biodiversity offset should preferably take place before the impacts of the activity occur, or as soon thereafter as reasonable and feasible"***.

1.2.2 Tracking of Biodiversity Offset Sites

Once a biodiversity offset site has been selected it should be recorded in the National Biodiversity Offset Register (NBOR) as soon as possible after endorsement of the site. The register will be available to other organs of state responsible for decisions which may impact the site. Note that the register has not yet been established, but SANBI are currently in the process of finalizing the design and initial population of the NBOR.

1.2.3 Financial Provision

Environmental Authorisation (EA) holders are responsible for covering all the costs of a biodiversity offset. These include the costs of securing and protecting a suitable biodiversity offset site, establishing the biodiversity offset site, rehabilitating it and managing it effectively for an appropriate period. It is recommended that the liability period is at least 30 years or as long as the duration of the authorised activity, whichever is longer.

1.2.4 Management of Biodiversity Offset Sites

Where offsets sites are secured under NEMPAA, “NEMPAA provides that a management authority must be appointed by the Minister or an MEC for the management of a PA. In terms of NEMPAA, any suitable person, organization or organ of state can be appointed as the management authority for special nature reserves, nature reserves and protected environments. A provincial conservation authority, municipality, non-profit organization, public benefit organization or conservation trust could therefore fill the role of implementing party”.

Guidance relating to management responsibilities for conservation servitudes is less clear. It is, however, understood that a conservation servitude should ideally be combined with a Biodiversity Offset Management Plan which would then outline the role and responsibilities of different parties.

1.3 Endorsement and operationalization of the Strategic Biodiversity Offset Framework Plan

To ensure the successful implementation of the Strategic Biodiversity Offset Framework Plan for Aalwyndal it is essential that the plan be endorsed and taken up as a basis for decision making.

According to the original Terms of Reference provided by the Western Cape Government DEA&DP: *“Once the project is completed it will be the Mossel Bay Municipality’s responsibility to obtain Council resolution/support on the implementation of the Strategic Biodiversity Offset Framework Plan and to develop an Overlay Zone and/or proactively rezoning the relevant land in the precinct to support the implementation of the Strategic Biodiversity Offset Framework Plan.”*

The reports generated as part of this assignment set out a clear proposal for financing and implementing biodiversity offsets to meet the offset obligations that will arise as developments proceed in the precinct. It will however be critical that the plan gets endorsed which should be followed by appropriate oversight to ensure effective implementation of measures outlined in this report by all parties concerned.

2. BIODIVERSITY OFFSET TARGETS

Biodiversity offset targets were calculated for planning purposes based on the proposed revision of the precinct plan presented in Report 1 by Confluent & Eco-Pulse. These were based on the calculated residual impacts (164.08 ha) and proposed offset ratio (4:1; determined in Report 2). The potential offset obligations if all “offset required” areas are transformed translates to an offset target of 656.32 hectares (Table 1). It is worth noting however that it is unlikely that Aalwyndal will be entirely developed in the immediate future. This may take place over a period of 10-20 years, and some landowners may decide not to develop the full extent of sensitive areas on their properties, which would translate to lower offset targets.

Table 1. Indicative offset targets for the Aalwyndal precinct. Based on the Confluent & Eco-Pulse Precinct Plan.

Vegetation Type	"Offset Required" areas	Offset Ratio	Offset Target
Mossel Bay Shale Renosterveld	19,25	4	76,98
Swellendam Silcrete Fynbos	144,12	4	576,49
Hartenbos Dune Thicket	0,71	4	2,86
Total (ha)	**164.08**	4	**656.32**

In calculating these targets, it is understood that additional offset obligations may arise through additional impacts to earmarked core areas in the precinct. Such impacts should be avoided as far as possible, but it is understood that such impacts may be unavoidable in the case of strategic essential services (e.g. roads, electricity, water, sewerage) that must be developed by the Municipality. The ratio proposed for any transformation of habitat within the Core Area is higher, at 10:1, which aims to act as a deterrent but not completely block all options. This option is limited to the municipality and is not applicable to private developers. It must also be highlighted that as with any proposed development, new development of essential services by the MBM still requires an environmental authorisation. The process for which will require that due consideration of development alternatives is provided.

Offset Ratios for the offset-required areas within Aalwyndal are applied as a standard ratio for all vegetation types and for impacts to areas of both Medium and High sensitivity as defined during this project. The latter means there would be no incentive for the degradation of habitat because the offset is applicable to both Medium and High sensitivity areas.

3. PHASED APPROACH TO OFFSET IMPLEMENTATION

Following extensive consultation with key stakeholders, agreement was reached to prioritize on-site conservation actions first, followed by supplementary off-site conservation actions to meet offset targets as development proceeds in the precinct. Such an approach recognizes the importance of effectively managing on-site conservation areas to ensure that biodiversity values are maintained in the long-term. For on-site conservation actions to contribute towards offset targets, these areas will be formally secured and managed with biodiversity conservation as the primary objective. Securing the onsite areas as offsets is dependent on full support of the MBM to facilitate the implementation of an approved Fire Management Plan for the precinct.

As development proceeds, the initial offset funding contributions will support the conservation and effective management of on-site conservation areas. Thereafter, the focus will shift towards meeting offset targets through the conservation of priority off-site areas that have been identified through this offset planning process. An indication of how this would work in practice is presented in Figure 1.

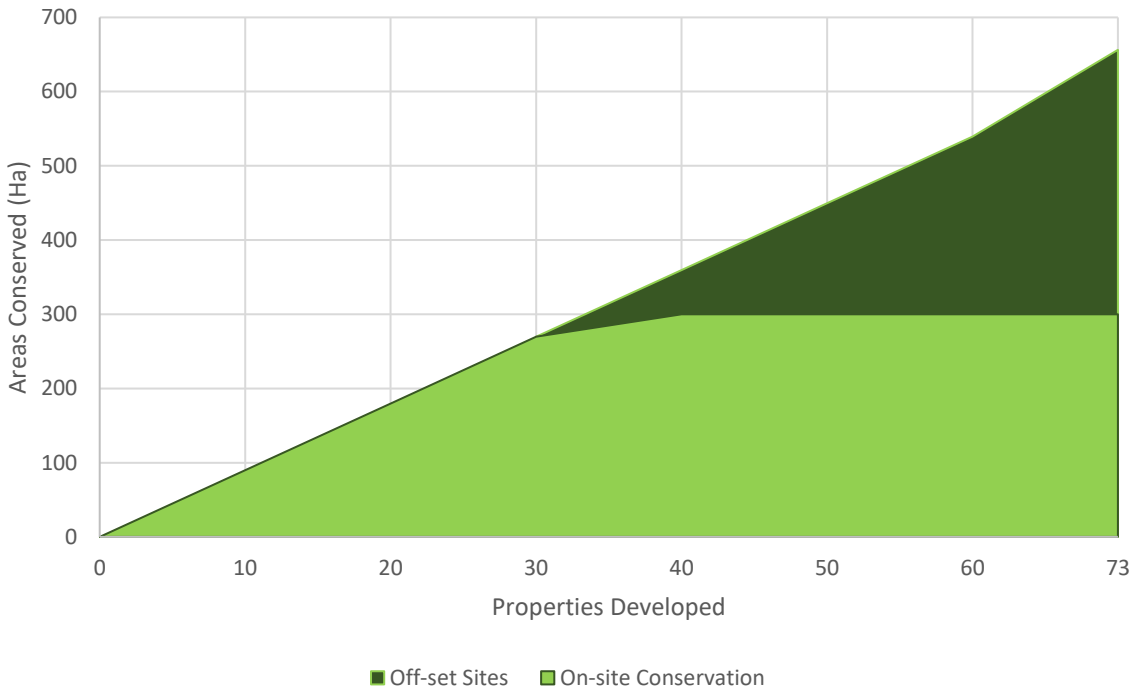


Figure 1. Phased approach to offset implementation illustrating the shift from on-site to off-site conservation as development proceeds.

4. PHASE 1: ON-SITE CONSERVATION

Core Areas have been delineated to protect areas most important for conservation whilst also conserving areas that provide valuable ecosystem services (e.g. watercourses and vegetated slopes). The layout has also been refined to ensure good connectivity across the precinct and with adjoining landholdings (Figure 2).

The earmarked on-site conservation areas are close to 300 Ha in extent (Table 2) and will contribute around 45% of the anticipated offset targets for the proposed development. The implication is that developments that trigger offset obligations up to 300ha will effectively contribute towards on-site conservation actions. Thereafter, funds stemming from further offset obligations will be used to fund conservation of priority conservation areas in the broader landscape.

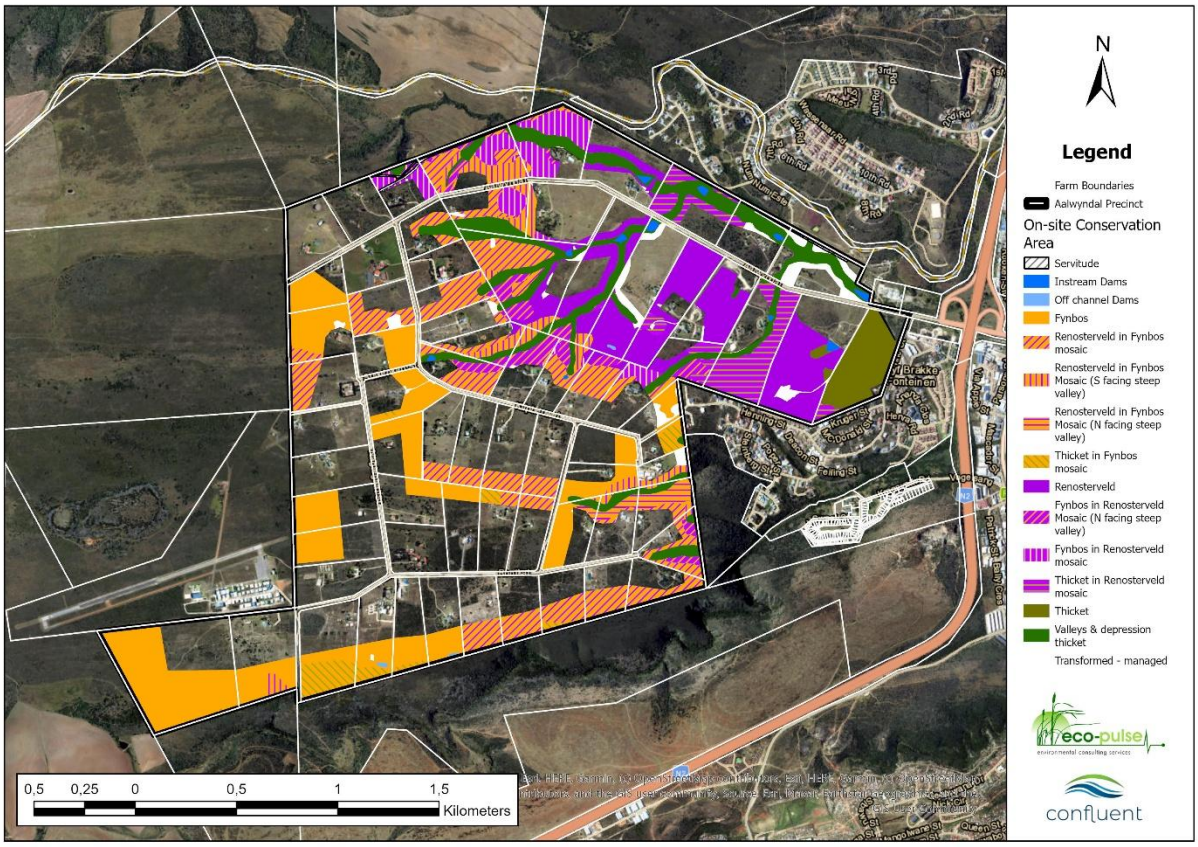


Figure 2. Overview of the proposed Core Area to be conserved as part of Phase 1 of the biodiversity offset framework.

Table 2. Overview of areas to be secured through on-site conservation actions.

Vegetation Type	Area (Ha)	Offset Contribution
Mossel Bay Shale Renosterveld	82,0	82,0
Swellendam Silcrete Fynbos	152,9	152,9
Hartenbos Dune Thicket	14,5	14,5
Other features (Watercourses, Dams, Transformed Areas)	47,0	47,0
Existing Servitudes (Regular disturbance expected)	3,6	N/A
Total (ha)	**299,9**	**296,3**

Note: Some existing servitudes are included in the Core Area. Given that these areas may be subject to regular disturbance, the offset contribution has been adjusted accordingly to exclude these areas.

4.1 Conservation Aspirations

The aspiration for the Core Area is that it should be formally protected and effectively managed with the conservation of biodiversity as the primary management objective. Given the urban context, a secondary aspiration would be to mitigate security risks and to create recreational and educational opportunities for residents.

4.2 Institutional and Financial Arrangements for Managing Core Areas

Formal protection and management of the Core Area will require strong coordination and significant financial inputs to ensure that biodiversity values are secured and maintained. Whilst the current onus rests on individual landowners to manage core areas, this is not regarded as a fair or effective means of securing biodiversity benefits in the long-term. As such, the importance of residents within the precinct sharing the costs and benefits associated with core areas has been emphasized through the consultation process. This will require decisions to be made in relation to both how finances are raised for the management of core areas and how any funds raised are collected and administered.

4.2.1 Raising Finances for Conservation Actions

On-site conservation areas will effectively be to the ultimate benefit and enjoyment of all residents. Consequently, it is reasonable to expect all residents to ultimately contribute towards on-site conservation actions rather than only those whose actions will impact directly on biodiversity. The Polluter Pays Principle[1] has relevance however and a greater liability should exist for landowners who transform sensitive habitats than those who have a lower impact on biodiversity.

There is also a need to ensure that properties that own large areas of core habitat, and who already have lower development opportunities, should not bear the burden for establishing fencing to secure such areas. A range of options to address these challenges and ensure a level of parity between residents have therefore been considered and have been used to develop a proposed institutional and funding model for on-site conservation actions.

For developers that trigger offset obligations offset funding will be used to fund on-site conservation efforts. Requirements for effectively managing on-site conservation areas have been outlined in Report 2. This includes a range of actions related to the establishment and management phases of earmarked conservation areas. A concerted effort has also been made to estimate reasonable costs that are necessary to ensure the effective conservation of this area over the long-term.

A key challenge in developing a workable funding model, however, is that costs for on-site conservation (R595 000/Ha) are significantly higher than that estimates for meeting offset obligations outside the precinct (R160 000/Ha). It is however not fair to expect those that develop early to pay a higher cost to meet offset obligations on-site than those that choose to develop their land at a later stage and fund off-site conservation actions. For this reason, offset costs have been set equal to the estimated costs for meeting offset obligations off-site (R160 000/Ha) whilst the funding gap for on-site conservation will be funded through the imposition of conservation levies on all landowners within the precinct as new developments unfold.

To be equitable, it is proposed that the conservation levies be based on the level of opportunities authorized on each property. Here, area of transformation is used a reasonable surrogate although the option of defining an “opportunity” for the purposes of determining the

[1] The Polluter Pays Principle (PPP) in South African legislation is a fundamental environmental policy that holds polluters responsible for the costs of preventing, controlling, and remedying pollution. It is embedded in the National Environmental Management Act (NEMA), 1998 (Act No. 107 of 1998) and related environmental laws. The PPP reinforces environmental accountability and sustainable development by ensuring that those who degrade the environment bear the financial burden, rather than society or the state.

levy could also be considered. This levy would ideally be imposed on both existing and future developments in the precinct although this may be challenging to apply retrospectively. In the case of new developments, the requirement to pay an annual conservation levy will need to be imposed as a condition of authorization. By adopting this approach, annual conservation levies would increase over time as development proceeds, thereby transitioning from a landowner-funded to precinct-level funded conservation area.

An initial indication of the relative contribution of conservation levies relative to offset contributions is provided in Table 3, below. This shows that offset contributions are expected to generate in the region of R48 Million over time relative to the costs of R179 Million to secure and manage on-site conservation areas over a 30-year period. An initial estimate of annual conservation levies that would need to be raised to effectively manage core areas is therefore calculated by taking the difference between these two figures and dividing by 30. This suggests that an annual conservation levy of close to R4.4 Million would be required to ensure the establishment and long-term management of on-site conservation areas. When averaged across the developable areas (314 Ha) as outlined in the proposed precinct plan, this translates to an annual cost of R13 940 per developable hectare.

Table 3. Initial estimates of conservation levies required to fund conservation of core areas.

	Cost Estimate (Full Extent)	Cost Estimate (Per Ha)	Cost Estimate (Per Developed Area)
Establishment	R50 140 000	R170 000	R159 692
Management (Annual)	R4 305 000	R14 354	R13 711
Management (30 Years)	R129 150 000	R435 000	R411 333
Full Cost (30 Years)	R179 290 000	R597 791	R571 025
Biodiversity Offset Contributions	**R47 987 360**	**R160 000**	**R152 836**
Conservation Levy Contributions (30 Years)	**R131 302 640,00**	**R437 791**	**R418 189**
Conservation Levy Contributions (Annual)	**R4 376 755**	**R14 593**	**R13 940**

Whilst this allocation may seem reasonable, the cash flow of the institution receiving and funding conservation actions needs to also be considered to ensure that this is a sustainable financial model. A financial analysis was therefore undertaken to model funding flows over a period of time that was based on full uptake of development opportunities in the precinct over a 21-year period (Figure 2). This shows that whilst income and expenses equilibrate over the long-term, there is a considerable gap in net revenue between years 6 and 21 which could undermine the viability of this scheme.

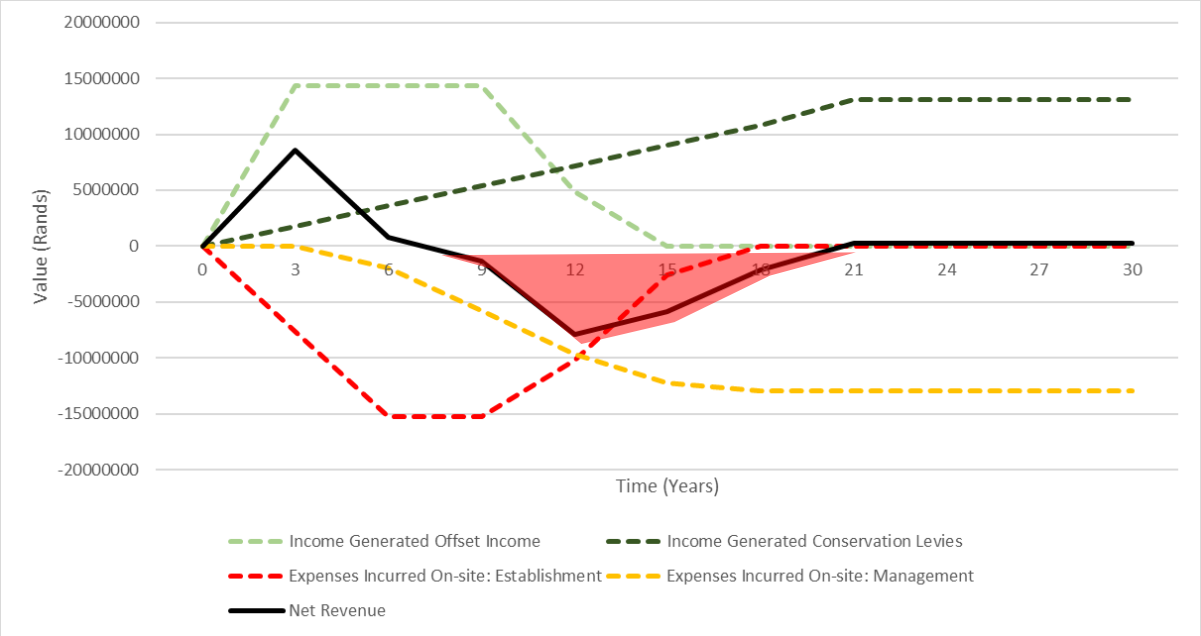


Figure 3. Preliminary cash flow analysis for on-site conservation areas.

Whilst preparing a full business plan for funding conservation efforts is beyond the scope of this assignment, this analysis does point to some possible options to address this shortfall. One option would be to slow down the expenses associated with site establishment such that spending is aligned with income available. This would effectively mean delaying the establishment of fencing until cash flow allows. Whilst this is a potentially workable option, it is important that the conservation area is demarcated as a priority. The implications of slightly increasing conservation levies on the fund balance over time was therefore assessed. This demonstrated that a moderate increase in levies by as little as 20% would result in a generally positive cash flow (Figure 3) which would then allow conservation efforts to be strengthened in line with the pace of development in the precinct.

Based on this rapid analysis, an **initial conservation levy of R16,500 per developable area is advocated as a starting point to help co-fund conservation actions** in the precinct. As illustrated in Figure 4, the conservation levy contribution could be lowered over time as levies required for conservation actions will decline once all conservation areas have been secured. Such funds could however also be used to enhance educational and recreational opportunities or help enhance security measures in the precinct over the long-term.

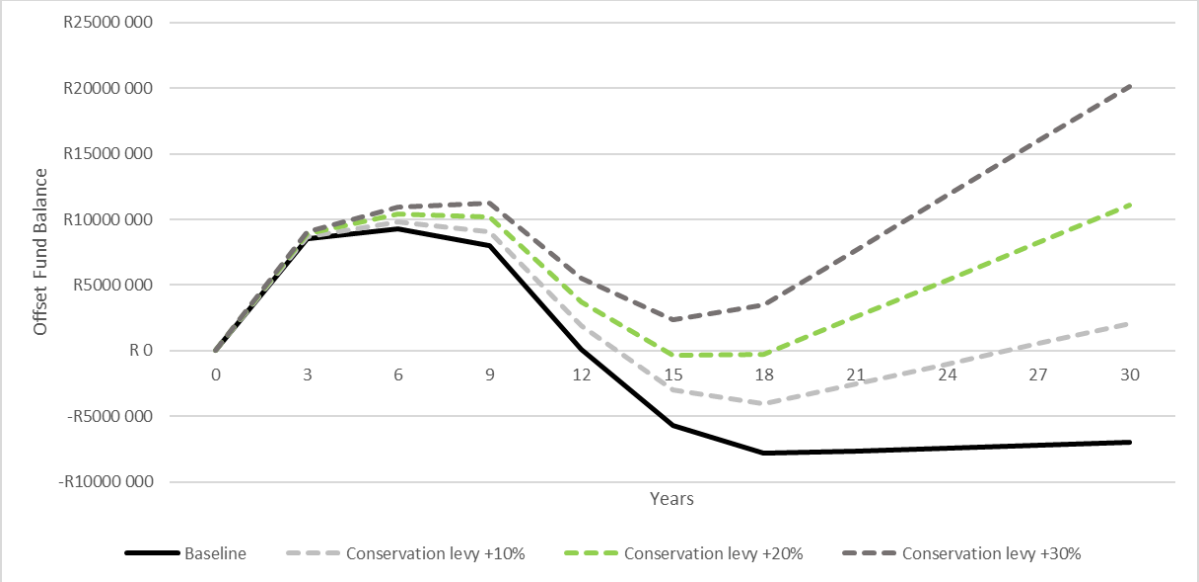


Figure 4. Analysis of changes in the offset fund balance in response to slight changes in the conservation levy fees.

This analysis serves to demonstrate that the proposed scheme should be viable, with some adaptive management during implementation. It is however worth noting that the financial analysis is simplistic in that it does not account for any additional administrative costs linked with establishing and maintaining the necessary institutional arrangements to oversee and manage these funds. The analysis also excludes any interest generated from savings which could be used to help offset the costs associated with increased administration costs.

4.2.2 Proposed Institutional Arrangements

Establishing appropriate institutional arrangements is critical to ensure the effective administration and management of core areas in the Aalwyndal precinct. Two options for the collection and administration of funds and for overseeing the management of core areas were identified and assessed as outlined below.

Special Rating Area (SRA)

An SRA is described as a clearly defined geographic area in which property owners agree to pay an additional levy for supplementary services. The geographic area in this case would be the Aalwyndal precinct. An SRA must be approved by Council and is aimed at preventing the degeneration of urban areas by funding upliftment, economic growth and sustainable development. The role of the municipality would involve facilitation and guidance, as opposed to initiating or advocating the SRA. Although in this case the SRA would need to be a prescribed measure.

The MBM already has a registered SRA in the CBD of Mossel Bay, but the financial division has highlighted some challenges that have been raised by the Auditor General in that the current financial model does not follow a typical course through supply chain management. This may jeopardise the use of this model in the future.

Typically, the SRA committee would determine an annual budget which would be submitted to the MBM. The MBM divide that budget between the number of members signed up to the

SRA to determine a monthly levy which is charged by the municipality along with rates. The funds are ring-fenced in a specific SRA account with the municipality, and are then disbursed to the SRA, who are responsible for the appointment of a 3rd party which is typically a Non-Profit Organisation (NPO) or similar. The NPO would be responsible for implementing actions according to the approved Conservation Management Plan.

While an SRA presents the most practical and preferred mechanism available for the collection, management and distribution of funds to manage the Core Area, there are a few challenges to the implementation of this option.

- An SRA is usually initiated by a community or neighbourhood, and not by the municipality. It is uncertain whether the municipality are in a position to prescribe that an SRA be established for Aalwyndal.
- The majority of landowners (> 50%) must agree to pay the additional levies on their property for the management of the Core Area.
- If > 50% of landowners in the SRA ever vote to exit the scheme, then it will be stopped and an alternative mechanism for financing the Core Area will have to be found.
- The Municipal Financial Management Act (MFMA) is highly regulated and if the SRA model is already attracting scrutiny from the Auditor General then it may be preferable to avoid this option.
- Procurement would need to be undertaken according to municipal requirements which can cause delays in securing suitable service providers.

While they represent a convenient collection agent for funds (given the existing rates structure) the disbursement of funds by the Municipality is potentially challenging and may affect long-term sustainability for management of the Core Area. Given these challenges, this is not viewed as preferred institutional arrangements.

Master Homeowners Association (MHOA)

The establishment of a Master Homeowner's Association (MHOA) was identified as a suitable and viable alternative to oversee the administration and effective implementation of conservation actions in the Aalwyndal precinct.

Membership to the MHOA would be compulsory for all new developments, which would be a condition of approval. The implication would be that any individual developers, future body corporates and homeowner's associations established in the Aalwyndal precinct would need to register as members with the MHOA. All biodiversity offset fund contributions and conservation levies would then be collected and held in trust by the MHOA to be used to fund on-site conservation actions.

All biodiversity offset and conservation levies collected would need to be explicitly used to fund the Core Area and may not be extended to other services to supplement municipal services in the area. This type of condition would be included in the constitution. The MHOA would ideally need to be established prior to the approval of any new developments, in the absence of which, a temporary mechanism for holding biodiversity offset funds would need to be established.

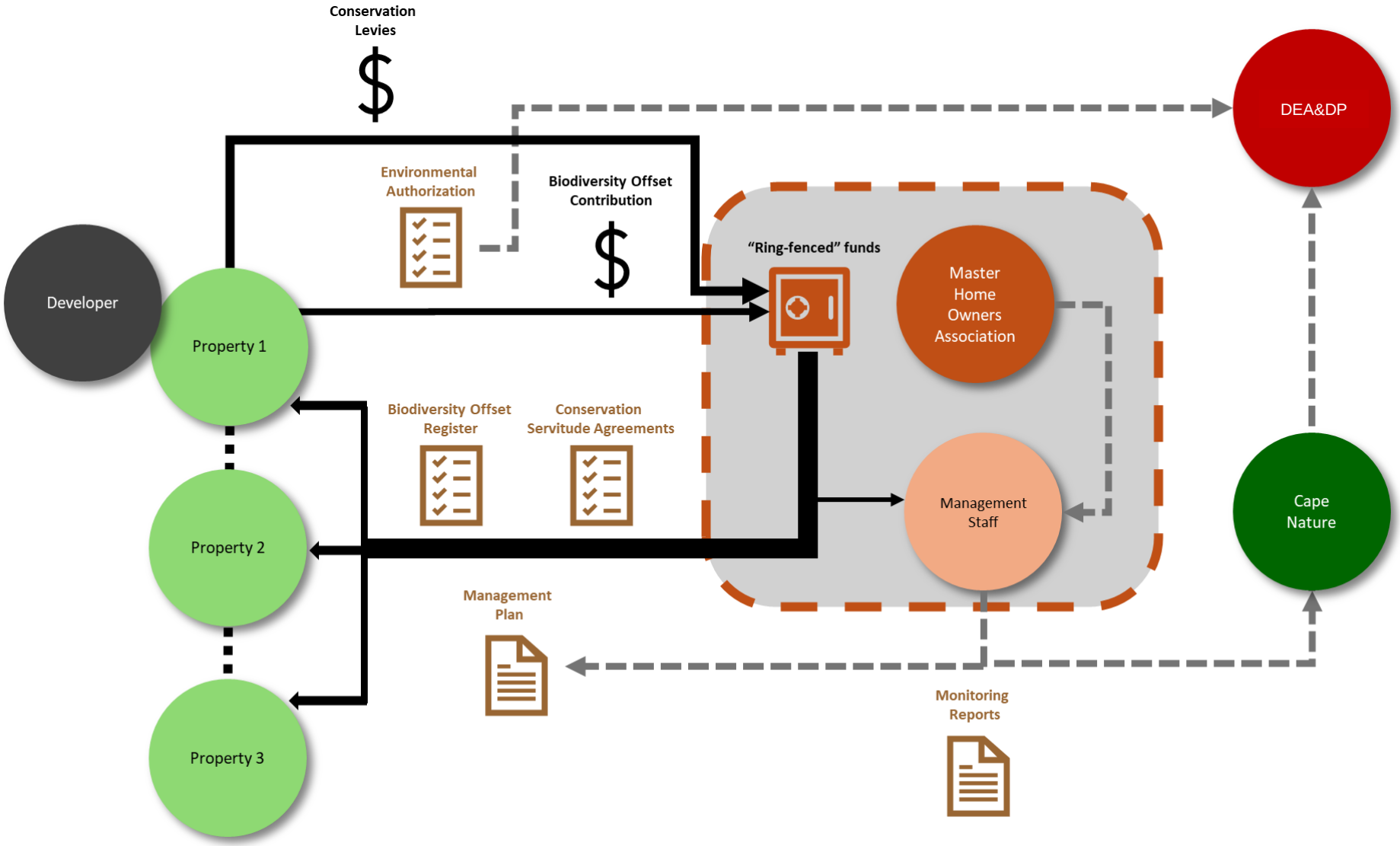


Figure 5. Schematic of proposed institutional arrangements and fund flows (black lines) for on-site conservation areas.

An overview of these proposed institutional arrangements, including the central role of the MHOA and indicative funding flows is illustrated in Figure 5. Offset obligations biodiversity offset contributions and conservation levies would be determined and outlined as part of individual Environmental Authorizations for each property. Biodiversity offset contributions would be paid to the MHOA prior to development commencing, whilst conservation levies would be paid on an annual basis. The MHOA would help to formalize Conservation Servitude Agreements for each property and would maintain a biodiversity offset register for all core areas secured in the precinct. The MHOA will then use funds to ensure effective conservation and management of on-site offset areas.

Setting up a Master Homeowners Association (HOA) for the precinct will involve several legal and administrative steps to ensure proper governance and compliance with relevant laws. A brief overview of the anticipated steps required is provided below:

1) Define the Purpose and Structure

- The Master HOA would oversee multiple smaller HOAs and Body Corporates established within a larger precinct or development.
- The role and responsibility of the MHOA specifically to ensure that core areas are secured and effectively managed needs to be specifically outlined.
- Clearly outline the roles, responsibilities, and governance structure in relation to subsidiary HOAs.

2) Develop a Constitution & Governing Documents

- Draft a Memorandum of Incorporation (MOI) if the MHOA is a Non-Profit Company (NPC) under the Companies Act, 2008.
- Alternatively, register as a common law association with a Constitution.
- Key provisions should cover:
    - Membership rules (automatic for property owners).
    - Voting rights and governance structure.
    - Financial management, levies, and budgeting.
    - Property maintenance and dispute resolution processes.

3) Register the HOA

- As a Non-Profit Company (NPC) – Register with the Companies and Intellectual Property Commission (CIPC) under Section 10 of the Companies Act.
- As a Common Law Association – No formal registration is required, but it must operate under a constitution which must be approved by the Mossel Bay Municipality.

4) Establish Financial & Administrative Structures

- Open a bank account for the HOA. This should include a designated savings or endowment fund where income from biodiversity offsets and conservation levies can accumulate with good interest rates.

- Finalize business plan that includes conservation levy structures for property owners to fund conservation actions.
- Prepare a standardized conservation servitude agreement between the landowner and the MHOA.
- Develop rules and regulations for access to conservation areas.
- Implement financial management and annual audit procedures.

5) Appoint a Management Team

- Elect a Board of Trustees or Directors from property owners with a diverse set of skills to balance environmental stewardship, governance, financial oversight, and community engagement responsibilities. A well-rounded HOA board for conservation areas should include members with:
    - Legal / Governance expertise (especially environmental and property law).
    - Finance / Accounting skills (for budgeting and funding).
    - Environmental Science / Ecology background.
    - Community Relations / Public Engagement experience.

6) Register with the Community Schemes Ombud Service (CSOS)

- Register with CSOS under the Community Schemes Ombud Service Act, 2011.
- Submit the MOI/Constitution and financial records.
- Pay annual CSOS levies.

7) Oversee conservation actions

- Appoint relevant staff or service providers to initiate management actions.
- Initiate fencing of core areas, in collaboration with landowners.
- Prepare and maintain a register of all core areas for which (i) conservation servitudes have been established and (ii) servitude agreements have been established.

4.3 Strengthening the Protection of Core Areas

In the short-term, a biodiversity overlay zone will be prepared that clearly outlines restrictions associated with the delineated Core Area. As development proceeds, there will be a need to formalize conservation actions as developments are authorized for individual properties. This will be achieved principally through the registration of conservation servitudes in favour of the MHOA as individual landowners choose to make their land available for conservation. There are however a range of complementary actions that can be implemented in parallel to raise awareness about the importance of conserving core areas to enhance the level of protection afforded to these areas.

4.3.1 Formalising a Biodiversity Overlay Zone

Environmental overlays offer a practical and complementary approach in support of base zoning, providing a mechanism for designating controls in addition to existing provisions defining base land-use zones. Such overlays are not necessarily constrained by cadastral boundaries, thus allowing additional controls to be superimposed on specific, spatially defined target areas. This provides an effective mechanism to allow the municipality to ensure that effective safeguards are put in place for biodiversity priority areas which would otherwise not be subject to any environmental screening or assessment (SANBI, 2021).

An additional benefit of an environmental overlay is that it can be used proactively to identify the spatial extent of environmental constraints. This ensures that development expectations are realistic, development conflicts are reduced, and project-level development planning is better informed. The Durban Metropolitan Open Space System has been adopted as an overlay zone in eThekwini Municipality and provides a good, working example of a Biodiversity Overlay Zone which is applied as a land use scheme with greater legislative authority than a policy. A summary of how D'MOSS functions is provided in the following box (DMOSS FAQs, eThekwini Municipality, 2016; Box 1).

Box 1. Durban Metropolitan Open Space System (D'MOSS)

Land Use Scheme

D'MOSS functions as a controlled area where development may not occur without first having obtained environmental approval from the provincial Department of Environmental Affairs, and authorisations are subject to significant environmental controls to protect biodiversity.

- Long-term prospects of formal protection of sensitive areas as Nature Reserves where land is acquired, or if retained under private ownership then zoned for conservation (Open Space III).
- Land under D'MOSS is not expropriated by council, but restrictions are prescribed in line with the land use scheme. There is no financial compensation for this. This is consistent with Section 24 of the Constitution. Any restriction imposed via a conservation zone are not arbitrary but are meant for the public good. Development rights are not being taken away, although restrictive conditions are imposed. This was confirmed by the High Court in 2014 in the matter of Le Sueur and Another vs eThekwini Municipality and Others. The Court was satisfied that municipalities are authorised to legislate:

"*in respect of environmental matters to protect the environment at the local level and that the D'MOSS Amendments in no way transgress or intrude upon the exclusive purview of the National and Provincial governance in respect of environmental legislation".*

- Development controls and limitations are imposed by D'MOSS. An example of one of the restrictions in the Controlled Area (similar to Core Area) is:

"*No person shall, within a D'MOSS controlled area (as defined in clause 1) develop any land, or excavate or level any site, or remove any natural vegetation from, or erect any structure of any nature whatsoever, dump on or in or carry out any work upon such site without having first obtained the prior approval of the Council in terms of this sub-clause"*

- The Municipality cannot legally manage private land without compensation by the landowner. As in the past, management of the property is the responsibility of the landowner. The Municipality may provide some support in the in the form of advice, guidance on preparation of an Environmental Management Plan, or alien clearing.
- The Municipality has applied a nominal rates value to land under D'MOSS. The nominal rates value is applicable once landowners have applied for an Environmental Certificate in terms of the Municipal Rates Policy. zoning and management activities.

The Biodiversity Overlay Zone will have to go through a Public Participation process and must also be approved by the council before it can be formally adopted as part of the Land Use Scheme. It is however envisaged that this would include a clear map (Figure 6) together with restrictions and obligations linked with each of the designated zones that would need to be formalized as part of the development process. Some initial guidance is provided here to inform the preparation of a Biodiversity Overlay Zone for the precinct.

Figure 6. Proposed biodiversity offset overlay based on the Confluent & Eco-Pulse Precinct Layout.

Core Areas

Management of the Core Area will remain the responsibility of individual landowners until the responsibility for managing such areas is transferred to the MHOA. Responsibilities and restrictions would differ depending on whether the landowner maintains the *status quo* with one or two residential dwellings in terms of Residential Zone 1 or opts to densify and rezone their property for development outside of the Core Area.

Responsibility for existing landowners

- No clearing of native vegetation in this zone.
- Alien vegetation clearing must be undertaken following methods provided in the Costed Conservation Plan.
- Responsibility for financing management retained but with provision for funding support through conservation levies once enforced through approved developments.
- Ongoing management of core areas in line with existing duty of care.

Restrictions and obligations linked to future development applications

- Core Areas to be re-zoned for conservation purposes with associated zoning restrictions.
- Conservation servitudes to be registered in favour of the MHOA.
- Management guidelines enforced in line with the Conservation Management Plan including fencing restrictions and requirements, fire management obligations, alien plant control, and erosion management etc.
- No development other than essential strategic infrastructure may take place in the Core Area.
- 10:1 offset ratios and associated offset costs linked to transformation applicable only to the MBM for development of essential strategic infrastructure. Alternatives must be considered and assessed, and development in the Core Area considered a last resort option as part of a standard application for Environmental Authorisation.

Offset Required Areas

Responsibility for existing landowners

- Ongoing management of sensitive areas in line with existing duty of care.
- Planning approval required for any clearing of vegetation.

Restrictions and obligations linked to future development applications

- Application of 4:1 offset ratios to determine offset obligations[2].
- Developer and any future body corporates or HOAs to join and maintain membership with the MHOA.
- Payment of biodiversity offset funds to MHOA appointed to deliver biodiversity offsets for the precinct.
- Search and rescue of any plant species of conservation concern and transplanting into areas requiring restoration in the core area.
- Payment of conservation levies to the MHOA to support management of on-site conservation areas.

Note that the requirement for approvals for any clearing of vegetation are over and above typical thresholds dictated in terms of NEMA. The same approach is followed by eThekwini Municipality with their D'MOSS (Durban Metropolitan Open Space System) overlay zone.

4.3.2 Rezoning of Core Areas

The effective conservation of the Core Area in Aalwyndal is partially dependent on the entire area being appropriately protected against future development and degradation. Ultimately, the best level of protection would be achieved if the Core Area was declared as a Nature Reserve in terms of NEMPAA and rezoned as Open Space Zone 4, but this will probably only

[2] Offset obligations and associated offset contributions will be paid to the MHOA. These funds will initially be directed to on-site conservation efforts. Once on-site offset opportunities have been exhausted, funds will be used to fund off-site conservation actions.

take place in the long-term. Initially, rezoning to Open Space Zone III will be more achievable. Descriptions of the different open space zones in the MBM zoning scheme are provided (Table 4).

Table 4. Overview of possible open space zonings (Mossel Bay Zoning Scheme).

Zoning	Primary Use	Consent Use
Open Space Zone 1 (OSZ1)		
The objective of this zone is to provide for active and passive recreational areas on public land, in order to promote recreation, and enhance the aesthetic appearance of an area.	**Primary use** Public open space	**Consent uses** Air and underground rights Environmental facilities Freestanding base telecommunication station Informal trading Tourist facilities Urban agriculture Utility service
Open Space Zone 2 (OSZ2)		
The objective of this zone is to provide for private active and passive recreational areas in order to promote recreation and enhance the aesthetic appearance of an area.	**Primary use** Private open space	**Consent uses** Cemetery Environmental facilities Freestanding base telecommunication station Informal trading Plant nursery Restaurant Shop Sport and recreation centre Tourist facilities Urban agriculture Utility service
Open Space Zone 3 (OSZ3) *"nature conservation area"* means the use and management of land with the objective of preserving the natural biophysical characteristics of that land, including the fauna and flora and includes occasional use, but does not include tourist accommodation or agriculture.		
The objective of this zone is to provide for the conservation of natural resources in areas that have not been proclaimed as nature areas (non-statutory conservation), in order to sustain flora and fauna and protect areas of undeveloped landscape including woodlands, ridges, wetlands and the coastline. A range of consent uses is provided to supplement and support the main objective of this zone.	**Primary use** Nature Conservation Area	**Consent uses** Conference facilities Environmental facilities Freestanding base telecommunication station Harvesting of natural resources Rooftop base telecommunication station Tourist accommodation Tourist facilities Utility service Wellness centre
Open Space Zone 4 (OSZ4) *"nature reserve"* means a national park or some other nature area that is owned by an organ of state or remains in private ownership and has been declared as a nature reserve or has a similar status in terms of legislation; it consists of an area that is utilised as a game park or reserve for fauna and flora in their natural habitat and includes environmental facilities, occasional use and worker accommodation.		
The objective of this zone is to provide for the conservation of	**Primary use** Nature Reserve	**Consent uses** Conference facility

natural resources in areas that have been proclaimed as nature areas (statutory conservation), in order to sustain flora and fauna and protect areas of undeveloped landscape including woodlands, ridges, wetlands and the coastline. A range of consent uses is provided to supplement and support the main objective of this zone.		Freestanding base telecommunication station Function venue Tourist accommodation Tourist facilities Utility service Rooftop base telecommunication station Wellness centre

Further descriptions for Open Space III and IV are provided in the zoning scheme as follows:

Open Space III: Nature Conservation Area
Land Use Description: *"nature conservation area"* means the use and management of land with the objective of preserving the natural biophysical characteristics of that land, including the fauna and flora and includes occasional use, but does not include tourist accommodation or agriculture.
Development Parameters: *(a)* The Municipality may require an environmental conservation plan to be submitted for its approval. *(b)* The Municipality must determine the land use restrictions and the development parameters for the property based on the objectives of this zoning, the particular circumstances of the property and, here applicable, in accordance with an approved environmental management plan. *(c)* One dwelling house is allowed if no dwelling house exists on another portion of the land unit zoned for agriculture purposes or if the full extent of the land unit is zoned Open Space III. *(d)* When a consent use to provide tourist facilities in a "nature conservation area" is approved, it is subject to conditions imposed by the Municipality with regard to layout, landscaping and building design. *(e)* A site development plan must be submitted to the Municipality for its approval, clearly indicating the position of all structures, services and internal roads.
Open Space IV: Nature Reserve
Land Use Description: *"nature reserve"* means a national park or some other nature area that is owned by an organ of state or remains in private ownership and has been declared as a nature reserve or has a similar status in terms of legislation; it consists of an area that is utilised as a game park or reserve for fauna and flora in their natural habitat and includes environmental facilities, occasional use and worker accommodation.
Development Parameters: *(a)* An environmental management plan must submitted to the Municipality, SANParks or CapeNature for their approval or to all of them for approval. *(b)* SANParks or CapeNature or both must, in consultation with the Municipality, determine the land use restrictions and the development parameters for the property based on the objectives of this zoning, the particular circumstances of the property, and in accordance with an approved environmental management plan. *(c)* When consent uses to provide tourist facilities or tourist accommodation in a "nature reserve" are approved, conditions must be imposed with regard to density, layout, landscaping, and building design. *(d)* A site development plan must be submitted to the Municipality for its approval, clearly indicating the position of all structures, stands, services and internal roads.

Rezoning of land carries costs in the region of R20-R30 000 per property. These costs cover advertising, application fees, document collation and submission. While this is not an

enormous amount of money, it is substantial if landowners are in a position where they do not currently have any aspiration to develop or sell their land and their primary development right does not require that they undertake any rezoning. Unless they have a strong personal commitment to conservation, available funds, and buy in to the long-term development and planning goals for Aalwyndal it is unlikely that these landowners would voluntarily rezone parts of the Core Area on their land. This would mean that rezoning of the Core Area would take place on a piece meal basis over a long time; triggered only by rezoning as a condition of development approval. As such, incentives for enhancing the protection of core areas should be encouraged.

4.3.3 Proposed Incentive for Voluntary Rezoning

An incentive is required to encourage the voluntary rezoning of sections of the Core Area by private landowners. This is especially relevant for landowners who are not inclined to sell or develop their properties in the near future. Without this, the process of rezoning and protection of the Core Area could take many years, and biodiversity loss could occur due to haphazard management. From the MBM's perspective, the incentive to rezone can be greatly simplified once the overlay zone has been successfully implemented. This removes a lot of the administrative costs from the process. The following options are provided for consideration:

1. A special working group be established at the MBM to facilitate a **Rezoning Incentive** which enables the voluntary rezoning of the Core Area free of charge for a specified time-period only.
    - A condition of this incentive should be that rezoning carries compulsory membership to the Master HOA or SRA as the body established to finance and manage the Core Area (discussed later).
    - The specific steps required for rezoning must be clarified to ensure that this recommendation is feasible and doesn't carry any hidden costs or unknown steps that require payment to private consultants.
    - The intent is that the MBM provide support the application and processing of rezoning as a service to support the establishment of the Core Area, which means it must be made.
    - The intention is that Conservation Levies raised by landowners in Aalwyndal would be used to help fund management of rezoned portions of the Core Area. Whilst it would take some time to raise funds, the intent would be to leverage finance from the precinct to cover management costs in the longer-term.
2. A zero rates agreement with the MBM for areas rezoned in the Core Area.

Once a development approval has resulted in the successful rezoning of the conservation area the rates should be reduced or removed proportionally for the area of land that has been zoned for conservation. This option should also be available to landowners with no immediate development agenda as an incentive. In the long-term, the rates rebate will provide a minor saving to landowners / developers, and in the short-term it provides an incentive to rezone in alignment with the Core Area. The cost for which, in the absence of any incentive, would be carried by the landowner.

4.3.4 Updating the Mossel Bay Draft Spatial Development Framework (SDF) / Environmental Management Framework (EMF)

The Mossel Bay SDF/EMF is a strategic tool developed to guide sustainable development within the Mossel Bay Municipality. It aims to balance environmental conservation with socio-economic growth by providing clear guidelines for land use and resource management. The document includes the demarcation of Environmental Management Zones/Spatial Planning Categories with associated Guidelines on Land Use and Activities (Mossel Bay Municipality (2023).

Given the lack of recognition of the importance of quite unique vegetation types in the region, the Conservation EMZs/SPCs (Core 1 and Core 2) do not adequately reflect the importance of core areas within the precinct or prioritized candidate biodiversity offset sites in the broader region. As such, there is a need to update the EMF data to specifically include priority areas for conservation identified through this study and to ensure that precinct offset categories, and the offset requirements are clearly articulated in the plan.

4.3.5 Longer-term considerations

Once the initial zoning of the Core Area has been undertaken as Open Space III it will be necessary to re-assess the situation and determine if rezoning to Open Space IV (Nature Reserve) is a feasible or desirable option, and if management or conservation outcomes would be benefitted in any way. This process would need to be driven by the Master HOA / SRA in collaboration with the MBM and CN. The rezoning to Open Space IV could potentially be seen as a proactive conservation step at this stage, which may attract additional support and inputs from CN.

4.4 Guidance for Future Development Applications

Whilst the adoption of the strategic biodiversity offset framework plan will serve to clarify development restrictions and biodiversity offset obligations, it is critical that the recommendations of the plan are integrated into policy and any future environmental or planning approvals for the precinct. This will require due process to be followed for any planned transformation of “Offset Required” areas in the precinct. A standard suite of conditions for development approvals is proposed to help streamline decision making and to ensure consistency with implementation over time.

4.4.1 Strategic Planning

For the biodiversity offset framework to be strategically and legally implemented, it is critical that the Municipality, together with DEA&DP take and support actions that are necessary for the plan to be effectively implemented. The suggested approach (with inputs from DEA&DP) follows these steps:

1. Once the Aalwyndal Strategic Biodiversity Offset Framework Plan is finalised, have the DEA&DP Head of Department sign off on this as a provincial strategy and upload this to the DFFE online screening tool (note this will not necessarily result in additional triggers, as the existence of a strategy on its own will not trigger a listed activity; however, if a listed activity is triggered it means that the Framework Plan will need to be taken into account in any EIA);

2. With council approval, update the precinct plan based on the revised precinct layout, inclusive of a public participation process;

3. Once the precinct plan is updated:

    - Implement a municipal overlay zone and associated rules/bylaws;

    - Update the Mossel Bay Environmental Management Framework (EMF) to incorporate the relevant information from the Biodiversity Offset Framework Plan, specifically the precinct offset categories and the offset requirements, if land is designated for environmental purposes (such as conservation) in an EMF then this serves as a trigger of the need for an EIA via the existing EIA listing notices.

Once the requirement for an application for EA is triggered the Competent Authority has the discretion to request additional studies that may not have been triggered by the screening tool, and conversely, to waive the requirement for a study if they are satisfied that it is not necessary.

Two key strategic priorities are outlined below whilst additional landowner guidance is also provided to further clarify some implications from adopting the biodiversity offset framework.

Strategic priorities

- A Master Homeowners Association must be established to which subsidiary Homeowners Associations/Body Corporates should be members. The purpose of the MHOA is to become the management and implementation body for the Core Area in Aalwyndal. This includes the collection and management of any conservation levies or biodiversity offset credits, and ensuring appointments are made to implement actions in approved conservation and fire management plans.

- Once established, the MHOA must prioritise spending on the development of a Fire Management Plan in collaboration with the Southern Cape Fire Protection Association (SCFPA). The plan must be approved by the Mossel Bay Municipality, Cape Natura and the Department of Environmental Affairs and Development Planning for the Aalwyndal Precinct. A copy of this plan must be provided to residents, developers and Homeowner Associations in Aalwyndal.

Guidance for landowners

- Developers, Homeowners Associations and Residents must be informed and aware that a Fire Management Plan (FMP) will be developed and approved for the Aalwyndal Precinct with the aim of maintaining biodiversity within the Core Area. By implication this means that various blocks of vegetation will be burnt under certain conditions in line with the approved FMP. Residents will be informed in advance of scheduled burns on different blocks, and if sensitive to any aspect thereof, will have sufficient notice to vacate the area for a short period of time.

- No thatched buildings will be supported within the Aalwyndal precinct due to increased fire risk. A contractor's all risk insurance policy (construction phase) must be in place followed by a commercial insurance or sectional title insurance policy following handover

of the completed development. The Fire Management Plan must be disclosed to the insurer in all cases.

- Any stormwater attenuation structures must be incorporated within the proposed development area and may not extend into the Core Area. Where necessary, stormwater outlets may be required near watercourses in the Core Area but should only be discharging attenuated outflow that has met the requirements of the Stormwater Master Plan for Aalwyndal. Attenuation within the development must be demonstrated before stormwater is discharged to a watercourse.

4.4.2 Standard Conditions Linked to Development Approvals

A set of standard development-linked conditions should be developed and applied by DEA&DP and/or the MBM for the approval of the environmental authorisation and/or the planning application. To inform this process, a list of conditions has been proposed:

- Participation in the Special Rating Area or Master Homeowners Association is compulsory for new developments. This includes the payment of conservation levies intended to support the Core Area in perpetuity.
- A biodiversity offset contribution, calculated at a cost of R640,000 per hectare of "Offset Required" area that will be impacted by authorized developments must be made to the Master Home Owners before commencement of the development. *This contribution is based on estimates for 2025 and must be adjusted annually by inflation for all future developments.*
- Conservation levies are payable by current and future landowners of the site. A levy of R16500/Ha per annum is payable for each hectare zoned for residential, industrial or other non-conservation uses. This levy is based on estimates for 2025 and must be adjusted for inflation by the MHOA on an annual basis.
- Formalize a conservation servitude in favour of the Master Home Owners Association and rezone the part of the property located in the Core Area as Open Space III.
- Prior to commencement with construction on the site the following actions must be taken:
    - Appoint a suitable botanical / horticultural specialist to undertake a search and rescue for any plants identified in the Biodiversity Specialist Walkthrough.
    - Undertake clearance of alien vegetation on your property in the Core Area following specified methods provided in the Conservation Management Plan.
    - Remove any existing fencing from within the Core Area on your property.
    - The Core Area is to be treated as a No-Go area for labourers or vehicles for the duration of construction.
- Any topsoil or rescued plants to be removed from the site should be made available for use on areas where rehabilitation is required in the Core Area. The MHOA should be consulted in this regard.
- Building insurance for any properties located alongside core areas must be maintained with full disclosure of the Aalwyndal Fire Management Plan to insurers in case of damage from wildfire.

A caveat to provision of these 'standard development conditions' for Aalwyndal is that a small number of developments have already been approved. The MBM and DEA&DP will need to

determine whether any of these conditions can be retrospectively applied to these developments.

4.5 Summarised Implementation Plan: Core Area

Whilst the biodiversity offset framework provides a clear basis for guiding offset actions in the precinct, there are a range of key steps that will need to be undertaken to ensure that the framework is successfully implemented. A summarised version of the proposed implementation plan, arranged more-or-less chronologically, is therefore provided in Table 5, below. In each instance, the responsible party is indicated.

Table 5. Summarised Implementation Plan for On-site Conservation Areas

Tasks	Actions Required	Responsible Party
Formalization of Strategic Biodiversity Offset Framework Plan	Endorsement of the Strategic Biodiversity Offset Framework Plan as a provincial strategy	DEA&DP
	Firm up on a list of standard conditions of Environmental Authorization for any impacts to “Offset Required” areas	DEA&DP
	Clarify specific requirements relating to specialist assessments as part of the EA process	DEA&DP
	Upload Strategic Biodiversity Offset Framework Plan to the DFFE online screening tool	DEA&DP
	Update the precinct plan based on the precinct layout, inclusive of a public participation process	MBM
	Revised precinct plan must be formally captured in a local Spatial Development Framework	MBM
Establishment of MHOA	Clarify roles and responsibilities for setting up the MHOA	MBM, DEA&DP
	Develop a Constitution and Governing Documents	MHOA
	Register the HOA and establish financial & administrative structures	MHOA
	Appoint Management Team and develop rules and regulations	MHOA
	Implement collection scheme, effective governance and ongoing compliance	MHOA
Formalize Biodiversity Overlay Zone	Prepare draft biodiversity overlay zone and associated regulations (restrictions and obligations) for the Aalwyndal precinct	MBM, DEA&DP, CN
	Update, finalize and adopt biodiversity overlay zone, inclusive of a public participation process	MBM
Formalizing Conservation Servitudes	Prepare a standardized conservation servitude agreement between the landowner and the MHOA that outlines restrictions, land-use conditions, and permitted activities to ensure conservation objectives are met.	MHOA, DEA&DP
Biodiversity Offset Register	Prepare and maintain a register of (ii) offset targets for all authorized developments; (ii) conservation servitudes agreements established.	MHOA
Core Area Rezoning Incentive	Working group to compile and distribute parameters for rezoning incentive to all landowners in Aalwyndal	MBM

Tasks	Actions Required	Responsible Party
	Recalculate adjusted rates based on reduction for rezoning as Open Space III	MBM
Development Planning and Approvals	Development approval subject to conditions a list of standard conditions in addition to site-specific conditions.	MBM, DEA&DP
	Applications to rezone the Core Area on the property to Open Space III.	Landowner & MBM
	Register conservation servitudes for all core areas included in the on-site conservation area,	Landowner & MHOA
Formalization of Conservation Levies	Update and finalise the Costed Conservation Plan provided in this report if necessary. Adjustments may be necessary after the above processes.	MBM appointed consultant
	Refine calculations for a Conservation Levy to be applied in the Precinct	MBM appointed consultant
Fire Management Plan	Compile a Fire Management Plan which includes specialist fire ecology inputs.	MBM, SCFPA, CN
Update the Mossel Bay EMF	EMF to incorporate the relevant information from the Biodiversity Offset Framework Plan, specifically the precinct offset categories and the offset requirements.	MBM, DEA&DP
Establishment and Management of Core Areas	Appoint Reserve Manager and Field staff to initiate management actions.	MHOA
	Engage with landowners to pro-actively establish conservation servitudes in priority areas.	MHOA
	Initiate fencing of core areas, in collaboration with landowners.	MHOA

5. PHASE 2: OFF-SITE CONSERVATION

As outlined earlier in this report, the initial focus of offset actions will be to secure and manage on-site conservation areas. Such actions are expected to contribute 296.3ha towards biodiversity offset targets. This would leave an additional 360.02ha to be secured to meet biodiversity offset targets as the precinct develops. Once on-site conservation actions have been fully realised (or, if progress is insufficient to meet offset targets), the emphasis will shift to securing additional offset sites in the broader region.

5.1 Overview of Prioritized Candidate Biodiversity Offset Sites

Priority off-site offset areas were identified in two priority categories, namely Tier 1 and Tier 2 (Figure 7). Potential offset areas seldom comprise the entire property and in most cases are blocks of land within a farm boundary which remain in a relatively untransformed state. The total potential land area for Tier 1 sites is 218 ha and Tier 2 sites total 1 263 ha. The combined total of these areas is significantly greater than the area required for offset.

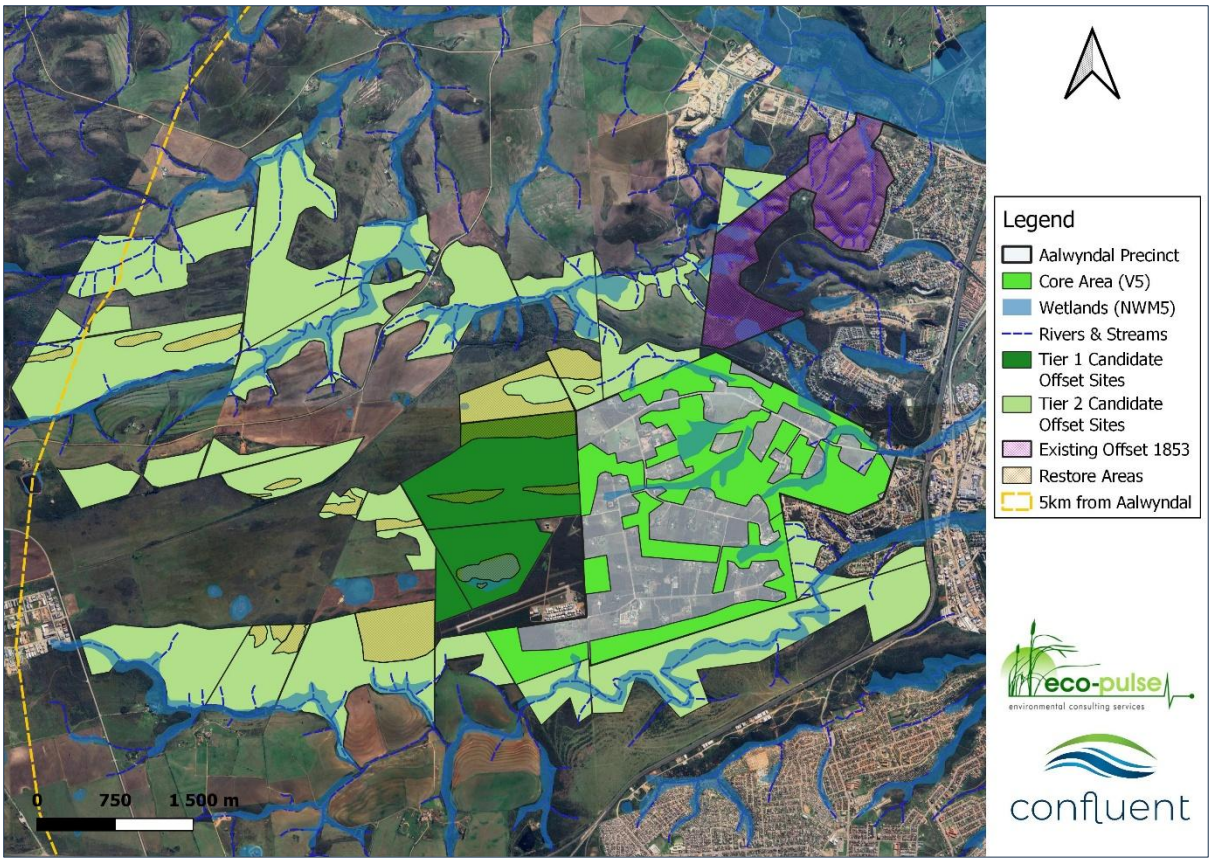


Figure 7. Extent and location of prioritized offset receiving areas.

The intention should be to secure Tier 1 sites as a priority, with Tier 2 sites following from there. This prioritisation is both in terms of landowner commitment as well as purchase of offset credits. According to the NBOG (2023), costs to establish and manage offset sites must cover a 30-year period, while formal protection of these areas must be in perpetuity.

5.2 Institutional and Financial Arrangements for Off-site Conservation Areas

It is important to note that off-site conservation actions will only be triggered once there is an indication of demand to meet offset obligations that cannot be met through on-site conservation efforts. Depending on the rate at which Aalywndal develops, this could be in anywhere from five and more than twenty years' time. During this period, the options for securing and managing off-set sites may change. An attempt has however been made to present what is regarded as a potentially workable and realistic approach to meeting off-set obligations on prioritized offset sites (Figure 8). A brief overview of the roles and responsibilities of different parties is outlined here.

5.2.1 Developers

Upon receipt of environmental authorization and/or planning approval, developers would be required to make a biodiversity offset contribution prior to any developments being permitted. It is important to note here, that new developments should not be approved unless it can be demonstrated that suitable biodiversity offset credits are available for purchase.

5.2.2 Master Home Owners Association (MHOA)

It is anticipated that the MHOA, responsible for on-site conservation actions, would still receive biodiversity offset contributions and maintain the register of payments received as development of the precinct continues. The MHOA would then be responsible, on behalf of individual developers to source biodiversity offset credits from a biodiversity offset credit provider. Any transactions would then be formalized by way of a biodiversity offset credit purchase agreement between the MHOA and biodiversity offset credit provider. Upon payment for offset credits, this agreement would effectively release the developer from any further offset liability which would then shift to the BOCP.

5.2.3 Biodiversity Offset Credit Provider (BOCP)

It is envisaged that an entity such as a Non-Profit Company or Biodiversity Offset Trust would be responsible for overseeing the effective established and management of conservation bank sites. Depending on the capacity of the entity involved, it may take on the role of the management authority for the offset sites or decide to employ another entity to serve in this role including the provision of support to landowners.

Whichever entity is used, it will be important that it is able to receive biodiversity offset funds and to secure these funds in a ring-fenced fund used specifically to meet offset obligations associated with the Aalwyndal precinct. There are a few existing trusts that may be available to take on this role such as the Conservation Heritage Foundation and the Table Mountain Fund. Funds for specific offset sites (e.g. for Aalwyndal) can be ring-fenced within these trusts. Alternatively, a new entity could be established with the aim of fulfilling this role at a more local level. Envisaged roles and responsibilities of this entity would include:

- Receive, manage and account for all offset funds – includes audited annual accounts.
- Prioritise sites based on a tiered approach which is aligned with the prioritised sites in this report. Preference given first to Tier 1 and 2 areas with enhanced connectivity value.
- Engage with and enter into agreements with landowners to manage suitable offset areas.

- Preparation of management plans (Biodiversity Offset Management Plan) and declarations as Nature Reserves.
- Ecological support to landowners
- Monitoring of conservation outcomes / compliance to management plan.
- Annual payments to landowners for conservation management. This would be for a period of 30 years.
- Maintain credit register per property.

To formalize and facilitate credit purchase sales, a biodiversity offset bank agreement would need to be established between DEA&DP and the BOCP that clarifies the role of the BOCP in receiving and administering funds for the expressed purpose of meeting offset obligations to compensate for impacts to biodiversity associated with the Aalwyndal Precinct Development. It would also make it clear that all biodiversity offset contributions received from developments in Aalwyndal would need to be ring-fenced and that annual audited financial statements would need to be submitted to show how finances had been utilized. DEA&DP would then be responsible for monitoring the extent to which offset targets are being achieved. Cape Nature could provide a supporting role by undertaking periodic inspection of offset sites.

The BOCP will need to have a certain amount of financing committed before they can engage with landowners further. It is also understood that some of the work may need to be done at risk, which could result in a delay in biodiversity credits being generated. Once established, the funding model assumes that the credit provider would extract an annual administration fee to cover the coordination, oversight and financial management services provided. There may however be a need for external funding support to help establish the conservation banking structure for this project, particularly given that this model is largely untested in the South African context.

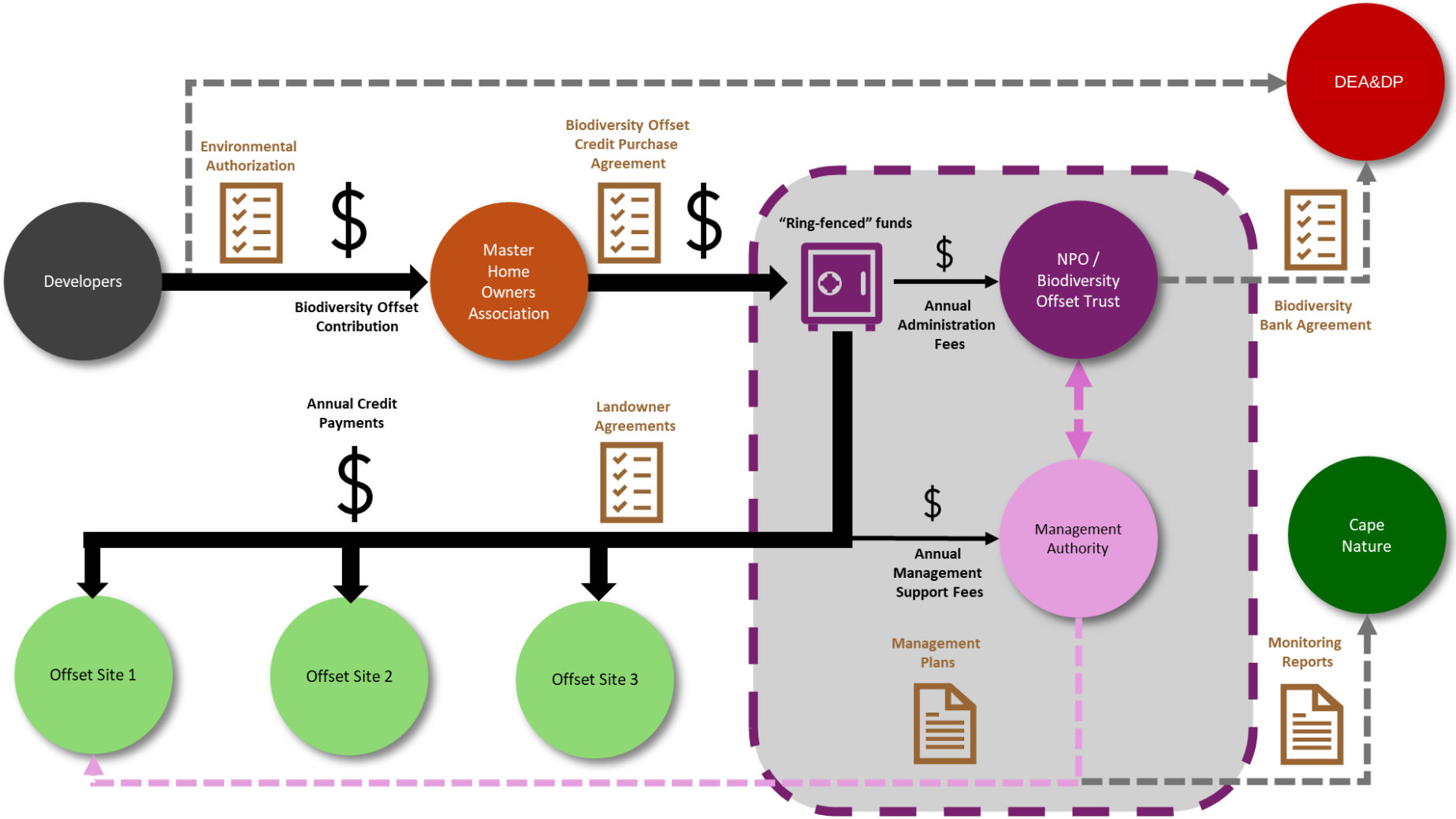


Figure 8. Indicative financial and institutional arrangements for off-site conservation areas.

confluent

5.2.4 Landowners

The primary model considered for securing offset areas would be that of a lease agreement between the landowner and the BOCP. The landowner would retain ownership of the land and would receive a pre-determined annual payment based on the number of credits purchased by the BOCP. Landowners may initially set aside a large area (e.g. 100 ha) but it may take some time before they start realising any return through credit sales.

Landowners are often wary of other working groups coming onto their property, so the most likely arrangement in terms of management would be that landowners would commit to management of the offset area in line with a conservation plan and with support from the biodiversity offset credit provider. The landowner can thus be the Implementing Agent if preferred. The following steps would be required:

- The extent of the offset area must be finalised between the landowner and the biodiversity offset credit provider.
- The offset area must be surveyed and set aside for conservation as a Nature Reserve in terms of NEMPAA. This process would be managed by the biodiversity offset credit provider but requires cooperation of the landowner.
- Sign a landowner agreement with the biodiversity offset credit provider for a period of 30 years.
- Preparation of an annual plan of operations.
- Implementation of the conservation management actions.
- Receive annual payments for those conservation actions linked to the number of credit sales.

Landowner Agreements would be signed between the BOCP and each landowner which would clearly outline (i) the roles and responsibilities of each party, (ii) financial flows and associated conditions. The landowner would then be required, as part of this agreement, to formally proclaim their property as a Nature Reserve and to ensure that the site is managed according to the management plan.

5.2.4.1 Land Use Agreements

A permanent land-use would be created through the formal declaration of a Nature Reserve, which makes signing a lease agreement not ideal. A more permanent arrangement would be preferred to a lease but buying out the servitude as an alternative to leasing would substantially increase costs and may not be consistent with landowner aspirations or represent a practical option which works on their property. This is because the landowner loses the use of that area, and it may intersect parts of their property. The lease agreement in combination with formal declaration as a Nature Reserve is therefore regarded as the most permanent practical option for securing the land in perpetuity.

A time lag between securing the offset in terms of landowner agreement and the first flow of funds from approved development is anticipated. During this time, a BOCP or alternative management authority would not have been appointed given the lack of funds available. Given that upfront costs would be incurred for the initial management of the offset area in line with conservation goals, one option would be to secure the site with an ‘In principle’ agreement. Legally this is seen as a stepping stone to a contract. In this manner there would be a high

level of confidence in securing the offset site and details of the commitment could be provided by both parties. The agreement could state that as soon as the first credit sales occur (the trigger) that a contract would come into effect. By the same token, the agreement could state that if a significant period of time had passed (>5 years) and no credits have been sold, the landowner could be released from that agreement if they so choose.

The In Principle Agreement should incorporate guidelines on the recommended land management practices that should be implemented to maintain the offset area in good condition, until it has been contractually formalised. If these recommendations are not upheld, it could jeopardise the site as a suitable offset area. Typical guidelines would be:

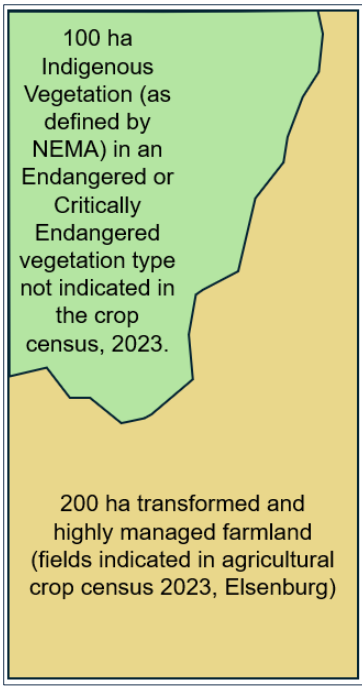
- Become a member of the SCFPA and establish fire breaks as per their recommendations.
- Ensure that any controlled burns are undertaken on individual blocks (not the whole area) and rotated every 12-15 years. Keep a record of fires and areas burnt. Renosterveld areas should not be grazed for 2 years following fire to ensure geophytes can set seed.
- Alien clearing to be undertaken on an annual basis, concentrated on watercourses, and post-fire establishment.
- As far as possible keep grazing livestock out of offset areas.
- Monitor trespassers and if persistent land invasion occurs then contact Anti-Land Invasion units for assistance.
- Ensure no dumping of waste of any sort takes place on the land.

In reality then, it is likely that initial financing of the BOCP would be used to secure in-principal agreements and to initiate formal protection of at least one site. Once formally proclaimed, each offset site would generate biodiversity offset credits based on the extent of conservation areas established. The landowner would then start receiving payments subject to credit purchases from the Biodiversity Offset Trust. So, whilst formal proclamation of the initial site will take some time, the proclamation of banking sites would mean that future landholdings could be secured in advance of impacts taking place.

5.2.4.2 Benefits for Landowners

It is important that the full suite of potential benefits to landowners are clarified as in many instances there is a strong perception that they should keep natural areas on their land available to compensate (offset) for their own development aspirations in the future. This is particularly relevant to owners of Tier 1 and Tier 2 properties proximal to Aalwyndal where the MBM has indicated a long-term development expansion in some areas. This, however, is not necessarily an accurate perspective on how their development aspirations could be fulfilled.

In most cases, agricultural properties are identified as the candidate offset areas for Aalwyndal. An explanation is provided for the typical development pathway and how offsetting on an agricultural property can provide the dual benefits of a passive income and management support for formal conservation of remaining natural vegetation, while sustaining the development opportunity on degraded areas where farming currently takes place (Figure 9).



Typical Development Pathway

- In threatened ecosystems, development proposals typically seek to avoid and minimise impacts by focussing development on highly modified areas of land (light brown).
- In most cases, actively farmed lands (provided rezoning is achievable) can avoid the requirement for offset because their ecological sensitivity would be rated Low to Very Low.
- Development in more natural areas (green) would typically not be supported (if more degraded land is a viable alternative) and if pressed, would likely require an offset which is calculated at ratios typically in the region of 20:1 or 30:1 in agricultural areas. Therefore, it is unlikely that sufficient land would be available for offset on such remnants – depending on the extent of area proposed for development.

Benefits of Offsetting

The opportunity that offsets provide is a passive income (lease) and management support for land for which ownership is retained in a formally protected area (Nature Reserve). Furthermore, development applications on other transformed areas of the property are not blocked and would be unlikely to attract an offset requirement due to their level of transformation.

Figure 9. Infographic providing an example of how offsetting can be beneficial in the development context for agricultural (or any other) land users.

A biodiversity tax incentive for nature reserves and national parks was introduced through Section 27D of the Income Tax Act No. 58 of 1962. Applicable conservation areas must be declared through NEMPAA, and the primary goal is to support conservation efforts by providing financial sustainability to critical conservation efforts nationwide.

Section 37D is applicable to land declared as a Nature Reserve or National Park in terms of Sections 20 or 23 of NEMPAA. The land must be subject to a title deed endorsement for a period of 99 years. If these criteria are met, then Section 37D allows for a 4% straight-line deduction on the land which has been protected. This deduction is applied to the taxpayers taxable income each year for a period of 25 years. The land valuation is calculated based on either the actual cost and improvements or a prescribed formula that considers municipal or market value.

The right of use is maintained which means that agricultural or commercial activities taking place elsewhere on the property can continue, but the tax deduction is applied proportionally. The tax deduction becomes effective in the tax year that protection is formalised. The deduction can be set off against taxable income or used to increase an assessed tax loss.

If the protected area status is terminated in terms of NEMPAA, the taxpayer may be liable for certain tax penalties.

Worked Example

Using the land areas provided in the example (Figure 9), the following calculations are provided by way of example:

Box 2: Worked Section 37D Tax Example

Land area set aside as a Nature Reserve = 100 ha or 33% of the total property area (300 ha).
Total land value = R20 million x 33% = R 6.6 million
4% x R6.6 million = R 264 000
R 264 000 can then be set off against the taxable income of the owner before tax payable is calculated.
So, if the owner made a profit of R1 million for the tax year he/she will only pay tax on R736 000 profit.
This benefit is calculated annually and is applicable for 25 years.

5.3 Estimating Costs for Meeting Biodiversity Offset Obligations

For planning and budgeting purposes, conservation actions needed to secure and manage candidate biodiversity offset sites have been grouped into an "Establishment" and "Management" phase. The establishment phase covers the first three years of implementation with a key focus on securing the legal protection of prioritized sites and funding initial management actions necessary to address key threats facing biodiversity. This is followed by the less intensive management phase where the emphasis is on maintaining the conservation values over the longer term.

Costs for both the establishment and management phases have been estimated for securing an offset site of 50 ha in extent and are summarized in Figure 10. This costing suggests that it would cost in the region of R55 000 / ha to formally establish offset sites whilst annual costs for management and monitoring have been estimated at R105 000 / ha over a full 30-year term. The combined cost estimate of **R160 000 / ha** was used as the basis for calculating offset contributions for development of "offset required" areas in the precinct.

Note that the first column of costs is based on today's estimates whilst adjusted costs are also indicated based on when offset actions are expected to be implemented. This was effectively achieved by including inflation at 6% in the adjusted cost calculations. Further details relating to the establishment and management phases are described in the sections that follow whilst additional detail on costing items and assumptions is provided in Annexure 3.

Budgeting spreadsheet
(Biodiversity Offset Sites)

Site Details	Offset Name	Aalwyndal Offset Site	
	Ownership	Private (Various owners)	
Offset Area	Property Name	Area (Ha)	
	TBC	50	
	Total Area (Ha)	**50**	
Phase	**Activity**	**Today's Costs**	**Adjusted Costs**
Establishment Phase (First 3 years)	OVERSIGHT & COORDINATION	R339 000	R366 000
	PRELIMINARY LANDOWNER ENGAGEMENT	R50 000	R53 000
	ESTABLISHING OFFSET SITES	R1 609 000	R1 715 000
	SITE MANAGEMENT	R555 000	R624 000
	MONITORING AND REPORTING	R45 000	R50 000
	Cost Estimate (Establishment Phase)	**R2 600 000**	**R2 810 000**
	Cost/Ha (Establishment Phase)	**R50 000**	**R55 000**
Management Phase (Estimated Annual Management Costs)	OVERSIGHT & COORDINATION	R32 000	
	SITE MANAGEMENT	R189 000	
	MONITORING AND REPORTING	R25 000	
	Annual Cost Estimate	**R246 000**	
	Cost over 30 years (Annuity estimate)		**R5 280 000**
	Cost/Ha (Management Phase)		**R105 000**
TOTAL COSTS	**Total Costs (Property)**		**R8 090 000**
	Cost/Ha (Biodiversity Offset Credit)		**R160 000**

Figure 10. Indicative costs for establishment and management of on-site conservation areas.

5.4 Establishment Phase

The establishment phase caters for actions to be implemented within the initial three years with a focus on securing prioritized conservation banking sites and initiating management actions. From a budgeting perspective, costs include setting up the foundations for effective management and includes aspects such landowner engagements, securing sites through appropriate legal; mechanisms, initiating payments for site management, together with monitoring actions. For ease of reference, headings in this section of the report have been aligned with the detailed costing spreadsheet included in Annexure 3.

5.4.1 Oversight and Coordination

A 15% fee has been allocated here for the BOCP to provide a coordination, oversight and financial management role. This allocation has been informed through discussions with a biodiversity offset trust that provides support of this nature but would need to be negotiated at a future date.

5.4.2 Establishing Offset Sites

This phase includes preliminary landowner engagement, and the formalization of biodiversity offset agreements with landowners of prioritized candidate offset sites. For these areas to contribute towards offset targets, it is critical that they are formally protected through an appropriate legal mechanism. Given the high conservation value of the sites, it is anticipated they would qualify for declaration as a nature reserve under the National Environmental Management: Protected Areas Act 57 of 2003. Costs have therefore been allocated to prepare management plans, and to provide additional technical support necessary to ensure that sites are formally proclaimed.

The need for fencing of conservation banking sites is uncertain at this stage and would need to be determined on a case-by-case basis. For planning purposes, fencing costs have been based on estimated installation costs for a 5-strand livestock fence around a rectangular property with a 4:1 length to width ratio. It is assumed that any more expensive fencing options to address security-related risks would be addressed by the landowner. A moderate budget for signage has also been provided.

5.4.3 Site Management

Site management costs cater for land lease arrangements, a fee for management and technical support needed to support conservation actions. Leasing costs of R 1500/ha/Annum was regarded as reasonable for costing purposes. This rate was informed by initial discussions with farmers in the area but will need to be refined through further consultation. An additional management fee of R2000/ha/Annum has been included to cover costs for fire management, alien plant control and policing of any illegal activities. This would not be adequate for situations where alien plant infestation levels are high, but this is not generally the case for earmarked conservation banking sites.

5.4.4 Monitoring and Reporting

Monitoring is critical to facilitate adaptive management and as such, some key monitoring elements have been included in the plan for the area. This includes:

- Ecological Monitoring (Annual): Monitoring to be undertaken by site manager to track progress with alien plant clearing and to be used as a basis for budgeting for the new year.
- Internal performance audit: An annual performance audit undertaken per property to check compliance against the management plan. It is envisaged that payments would be held back or discounted if sites are not being managed appropriately.
- External performance audit: An external performance audit would be undertaken for a select set of properties every 5 years. This would be used to provide an independent perspective of conservation efforts and would be submitted to DEA&DP and Cape Nature.

5.5 Management Phase

The management phase effectively caters for the ongoing management and monitoring of conservation banking sites following the initial establishment phase. The emphasis here, is therefore on ensuring the conservation values are maintained through appropriate interventions.

5.5.1 Oversight and coordination

As per the establishment phase, a 15% allocation has been made for the BOCP to ensure effective administration and management of the portfolio of conservation banking sites.

5.5.2 Management Activities

Management activities are the same as those costed for during the establishment phase and includes allocations for management planning support, lease and management fees and technical support.

5.5.3 Monitoring and Reporting

Monitoring and reporting are expected to continue on an annual basis in line with that outlined for the establishment phase.

5.6 Summarised Implementation Plan: Off-Site Offset Areas

A summarised version of the proposed implementation plan is arranged more-or-less chronologically (Table 6). In each instance, the responsible party is indicated.

Table 6. Summarised Offset Implementation Plan for Off-site Offset Areas.

Phase	Actions Required	Responsible Party
Spatial Planning	Consider the incorporation of offset bank properties as open space areas in the SDF/EMF to reduce threat from future developments.	MBM
Advancing planning for implementation	Further develop and refine proposed conservation banking arrangements including required legal agreements.	DEA&DP
	Formalize an offsite offset management agreement with a suitable Service Provider	DEA&DP
	Administrate the collection of biodiversity offset contributions from developers.	MHOA
Engagement with landowners of candidate offset sites	Baseline ecological surveys to confirm suitability and obtain approval on sites by Cape Nature	BOCP
	Refine financial estimate for securing and managing candidate offset sites.	BOCP
	Formalise in Principle Agreements with landowners to establish conservation banking sites.	Land-owner, BOCP
Securing prioritized offset sites	Develop a Biodiversity Offset Management Plan (BOMP) including a Fire Management Plan (in collaboration with the SCFPA)	BOCP
	Formalize Biodiversity Offset Credit Purchase Agreements	MHOA, BOCP
	Initiate process of declaring sites as Nature Reserves in terms of NEMPAA	Land-owner, BOCP
	Once contracts are formalised with offset landowners, add the properties to the National Biodiversity Offset Register.	DEA&DP
Conservation management	Disbursement of funds to landowners in line with credit sales.	BOCP
Monitoring and auditing	Ecological monitoring activities	BOCP
	Ongoing Adaptive Management	Land-owner

6. FINANCIAL VIABILITY OF THE SCHEME

Whilst best-practice guidance has been used to develop this biodiversity offset framework, an evaluation of financial viability is regarded as critical to demonstrate the viability of the scheme.

An important first step in this process was to build an understanding of anticipated future use of the Aalwyndal precinct in terms of land use. Based on discussions with the planning department from the Municipality, it is understood that the intention is for most of the area to be developed for quite high-density housing (20 opportunities per hectare), whilst some areas would likely be zoned for commercial or mixed-use purposes. An assessment of property pricing was then undertaken to help build an understanding of base prices prior to the introduction of biodiversity offset obligations. This was informed by WinDeed's searches of recent property sales in the region, together with a search of the values for properties for sale being advertised in the area. A summary of this analysis is presented in Table 7, below and whilst the analysis is not directly transferable to the Aalwyndal context, it suggests that an "average" residential piece of undeveloped but serviced land (500m^2) in Aalwyndal might sell for in the region of R220K to R500K. If offset prices are significant relative to the existing land

prices, there is a risk that people will rather invest in areas where land prices are more affordable.

Whilst it is understood that landowners will have different aspirations, calculations were then made to determine the actual expected costs associated with offset commitments for each land parcel in the Aalwyndal precinct. This was based on an offset cost of R640 000/Ha and a conservation levy of R16 500 per developable hectare (Annexure 4).

The analysis showed that the additional costs that would apply to a standard residential stand (500m^2) would range between R5000 and R30 000, with an average of approximately R18 500 (Figure 11). This cost is regarded as moderate in relation to the expected purchase prices for properties in the region.When translated to a stand level, the monthly conservation levy translates to R69/month. Given that typical estate levies range between R1500 and R2500 per month, this cost is regarded as well within acceptable limits.

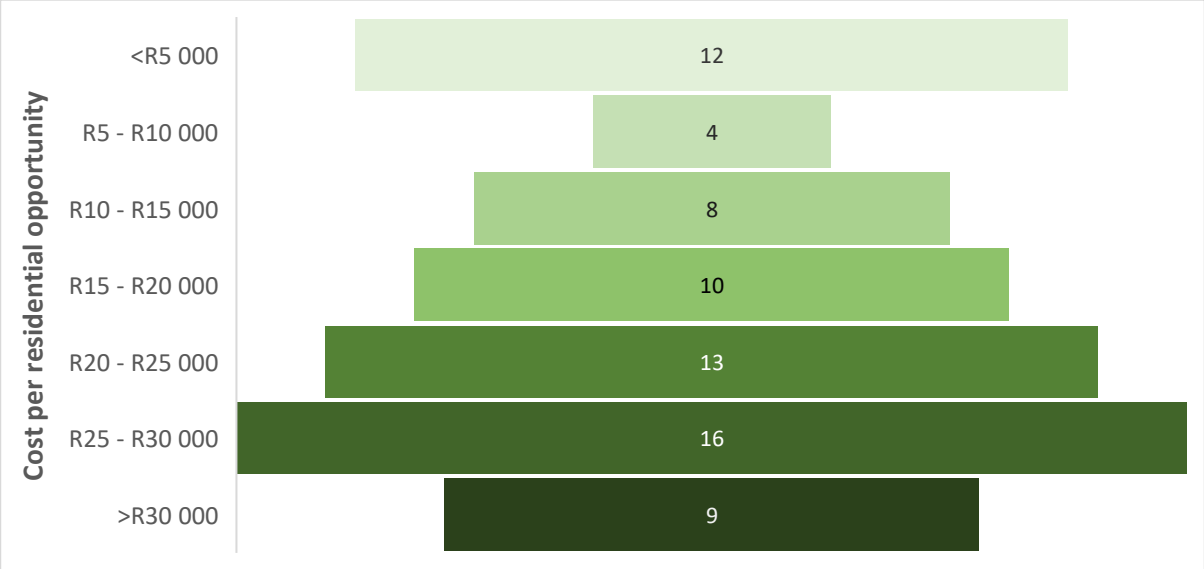


Figure 11. Overview of expected biodiversity offset contributions for individual residential developments (Numbers refer to the number of properties falling into each class).

Table 7. Indicative land prices in the Mossel Bay area. Cells shaded in green are likely to be most relevant to the Aalwyndal context.

Context		Property Size (m2)			Value (R/m2)			Value (R)		
		Low	Average	High	Low	Average	High	Low	Average	High
Low Cost Residential (Sonskynvallei)	Land Only	200	250	300	R80	R100	R120	R16 000	R25 000	R36 000
	Developed	200	250	300	R500	R750	R1 000	R100 000	R187 500	R300 000
Moderate Cost Residential (Hartenbos)	Moderate Cost Residential	500	625	750	440	R550	660	R220 000	R343 750	R495 000
	Developed	500	625	750	1250	R2 125	3000	R625 000	R1 328 125	R2 250 000
High Cost Residential (Hartenbos / East of Aalwyndal)	Land Only	800	1000	1200	R800	R1 000	R1 200	R640 000	R1 000 000	R1 440 000
	Developed	800	1000	1200	R2 000	R3 500	R5 000	R1 600 000	R3 500 000	R6 000 000
High Cost Lifestyle (Aalwyndaal)	Land Only	10000	80000	150000	R36	R48	R60	R360 000	R3 840 000	R9 000 000
	Developed	10000	80000	150000	R100	R150	R200	R1 000 000	R12 000 000	R30 000 000
Industrial (Mossdustria)	Land Only	1000	5500	10000	R500	R700	R900	R500 000	R3 850 000	R9 000 000
	Developed	1000	5500	10000	R2 000	R3 500	R5 000	R2 000 000	R19 250 000	R50 000 000

7. REFERENCES

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8. ANNEXURES

Annexure 1. Review of Previous Biodiversity Offset Recommendations

Mechanisms for implementing the biodiversity offsets required in Aalwyndal were considered by Brownlie and von Hase (2021). In this report it was emphasized that the landowner or developer who cause the residual impacts of medium or high must be responsible providing an appropriate offset, which is likened to the 'polluter pays' principle. The report highlighted the benefits of a mechanism that could be applied at a strategic scale as follows:

- Strategic aggregated offset areas could help consolidate priority biodiversity areas.
- Individual developer contributions would be channelled into securing and managing an offset area over time.
- The financial requirements associated with having to provide an offset would be clear up front to would-be developers.
- Individual developers would be relieved of the burden of finding their own offset sites.
- Development of the Aalwyndal precinct would be facilitated.

Suggestions to secure and protect the offset were made for both on-site and off-site offsets.

8.1.1 Securing and Protecting the On-site Offset

- The Open Space (Core Area) would need to be formally captured in a local Spatial Development Framework or Spatial Development Plan.
- An overlay zone should be applied to erven in Aalwyndal which carries additional requirements for applicants when they seek to upgrade their development rights. An overlay zone is applicable in addition to base zoning and can stipulate development parameters that can be more or less restrictive.
- The offset areas within the precinct (Core Area) would need to be set aside as a formal protected area and zoned Open Space IV or Open Space III permitting only consent uses compatible with biodiversity conservation.
- A Conservation Management Plan (CMP) would need to be developed for the open space areas (Core Area).

8.1.2 Securing and Protecting the Off-site Offset

- Strategic option would be for the MBM to develop an offset bank where developers could secure offsets through an appropriate payment to the bank. Payments would cover the 'bank's' establishment, protection, and ongoing ecological management costs.
- The off-site offset should be formally protected in perpetuity, preferably as a Nature Reserve in terms of NEMPAA.
- For any areas intended to be 'banked', agreement would need to be obtained from competent authorities that conservation activities were explicitly intended to provide 'proactive offsets' for future development in Aalwyndal where biodiversity offsets are required.

Management of both on-site and off-site offset areas was discussed, although these are abbreviated, as several suggestions relating to the MBM as a responsible entity have since been rejected as options by the MBM.

8.1.3 On-site Offset Management

The responsibility of the MBM would be to ensure that no development was permitted in open space areas (Core Area) of Aalwyndal. Note that management costs would fall to the Home-Owners Association for any Private Open Space II incorporated into a development area. This is distinct from the Core Area however, which would be managed and financed as a unit. Consider the establishment of a private entity to manage open space (the Core Area).

8.1.4 Off-site Offset Management

- Where a formal agreement has been made to secure an offset site as part of the 'bank' then either the landowner, the MBM or a third-party implementing agent would be responsible for its management in accordance with a Biodiversity Offset Management Plan (BOMP).
- The off-site offset areas should be formally declared as a Nature Reserve in terms of NEMPAA. In this case, CN could potentially provide oversight, management support, and performance audits.

8.1.5 Financing On-site Offset Areas

An estimate of costs for management of open space (Core Area) within Aalwyndal was provided, although this has since been updated as part of the present project (Costed Municipal Conservation Plan).

Financial models for sourcing funds to secure and manage the on-site offset areas (Core Area) were suggested:

- For the on-site conservation areas, suggested each landowner contribute financially via their annual property rates to the maintenance and management of the open space (Core Area). This provision would need to be escalated appropriately on an annual basis.
- All new developments would be charged a conservation levy which would contribute to management of the open space in accordance with a Conservation Management Plan. The levy could be administered through a City Improvement District (CID) to be established by the MBM.
- Make provision for a rates rebate for landowners who apply and qualify for an 'environmental certificate' through the municipality. To qualify for certification the property would need identified areas of high biodiversity sensitivity, consent to register a conservation servitude, and/or rezone the targeted area as Open Space III or IV. Landowners would also need to commit to managing the land in accordance with an approved Conservation Management Plan.
- Establish a Special Rating Area (SRA). This allows additional rates over and above the standard rates to be levied to raise funds for management and improvement of the area.
- The above arrangements would need to be managed by the MBM who would need to:

- Manage and maintain a separate account recording contributions and deductions by landowners.
- Establish a separate account for conservation levies from developers to finance off-site offset areas.

8.1.6 Financing Off-site Offset Areas

Up-front costs would be as follows:

- Land purchase or leasing costs.
- Legal costs related to agreements, rezoning etc.
- Baseline ecological surveys (covered in this project)
- Declaration as a protected area (advertising, gazetting and other costs)
- Fencing, equipment, alien clearing, restoration and effective management costs.
- Firebreak clearing

Longer-term costs were identified as:

- Alien invasive plant clearing
- Fire management including fire breaks, load management and ecological burns.
- Monitoring and managing any erosion.
- Wildlife management (if required).
- Repairs to infrastructure such as fences.
- Transport and materials.
- Monitoring and auditing costs.
- Law enforcement / patrols (if needed).

An off-site 'offset bank' must be established by the MBM comprising of suitable offset sites for the use of developers who require offsets. Each developer would be required to pay a conservation levy (offset fee) to the MBM in lieu of having to provide their own individual offset.

A *pro rata* conservation levy per hectare of development on Aalwyndal would need to be set at an estimated R600 000 – R1 million /ha for the SES layout plan and between R1 – R1.3 million for the Brownlie layout (based on cost estimates at that time). A large number of caveats to these estimated costs were provided, noting in particular that any land purchase costs or costs of leasing land under a stewardship arrangement were not included.

Annexure 2. On-site Conservation: Cash-flow projections

2a. Initial projection (Conservation Levy = R13 940.00 / developable Ha)

Years	Expected Properties Developed (No.)	On-site Area Secured (Ha)	Off-site Area Secured (Ha)	Income Generated		Expenses Incurred		Net Revenue	Fund Balance
				Offset Income	Conservation Levies	On-site: Establishment	On-site: Management		
0	0	0,0	0,0	0	R0	R0	R0	R0	R0
3	10	89,9	0,0	R14 385 184	R1 798 666	-R7 642 129	R0	R8 541 721	R8 541 721
6	20	179,8	0,0	R14 385 184	R3 597 333	-R15 284 258	-R1 935 766	R762 492	R9 304 213
9	30	269,7	0,0	R14 385 184	R5 395 999	-R15 284 258	-R5 807 299	-R1 310 375	R7 993 839
12	40	299,9	59,7	R4 831 809	R7 194 665	-R10 209 027	-R9 678 832	-R7 861 385	R132 453
15	50	299,9	149,6	R0	R8 993 332	-R2 566 899	-R12 264 799	-R5 838 367	-R5 705 913
18	60	299,9	239,5	R0	R10 791 998	R0	-R12 915 000	-R2 123 002	-R7 828 915
21	**73**	299,9	356,4	R0	R13 130 264	R0	-R12 915 000	R215 264	-R7 613 651
24	73	299,9	356,4	R0	R13 130 264	R0	-R12 915 000	R215 264	-R7 398 387
27	73	299,9	356,4	R0	R13 130 264	R0	-R12 915 000	R215 264	-R7 183 123
30	73	299,9	356,4	R0	R13 130 264	R0	-R12 915 000	R215 264	-R6 967 859
33	73	299,9	356,4	R0	R13 130 264	R0	-R12 915 000	R215 264	-R6 752 595
36	73	299,9	356,4	R0	R13 130 264	R0	-R12 915 000	R215 264	-R6 537 331
39	73	299,9	356,4	R0	R13 130 264	R0	-R12 915 000	R215 264	-R6 322 067
42	73	299,9	356,4	R0	R13 130 264	R0	-R12 915 000	R215 264	-R6 106 803
45	73	299,9	356,4	R0	R13 130 264	R0	-R12 915 000	R215 264	-R5 891 539

2b. Revised projection (Conservation Levy = R16 5000.00 / developable Ha)

Years	Expected Properties Developed (No.)	On-site Area Secured (Ha)	Off-site Area Secured (Ha)	Income Generated		Expenses Incurred		Net Revenue	Fund Balance
				Offset Income	Conservation Levies	On-site: Establishment	On-site: Management		
0	0	0,0	0,0	R0	R0	R0	R0	R0	R0
3	10	89,9	0,0	R14 385 184	R2 114 591	-R7 642 129	R0	R8 857 646	R8 857 646
6	20	179,8	0,0	R14 385 184	R4 229 183	-R15 284 258	-R1 899 794	R1 430 315	R10 287 961
9	30	269,7	0,0	R14 385 184	R6 343 774	-R15 284 258	-R5 699 382	-R254 682	R10 033 279
12	40	299,9	59,7	R4 831 809	R8 458 365	-R10 209 027	-R9 498 970	-R6 417 823	R3 615 456
15	50	299,9	149,6	R0	R10 572 957	-R2 566 899	-R12 036 882	-R4 030 824	-R415 368
18	60	299,9	239,5	R0	R12 687 548	R0	-R12 675 000	R12 548	-R402 820
21	73	299,9	356,4	R0	R15 436 517	R0	-R12 675 000	R2 761 517	R2 358 696
24	73	299,9	356,4	R0	R15 436 517	R0	-R12 675 000	R2 761 517	R5 120 213
27	73	299,9	356,4	R0	R15 436 517	R0	-R12 675 000	R2 761 517	R7 881 730
30	73	299,9	356,4	R0	R15 436 517	R0	-R12 675 000	R2 761 517	R10 643 247

Annexure 3A. Cost estimates for the Establishment Phase (First 3 years) – for a 50Ha offsite conservation area

1	ESTABLISHMENT PHASE (Cost Estimate for first 3 years)								Annual Cost Allocations			TOTAL COSTS	
Item	**Activity**	**Description**	**Who?[3]**	**Unit**	**Qty**	**Note (Quantity Estimate)**	**Cost / Unit**	**Basis for unit cost estimate**	**1**	**2**	**3**	**Un-adjusted**	**Adjusted**
1,1	***OVERSIGHT & COORDINATION***								***R255 636***	***R53 250***	***R30 000***	***R338 886***	***R366 536***
	Administration Fee	Fee for NPC to provide a coordination, oversight and financial management role	BOT	Item	1,0	Annual Fee	Variable	Based on a 15% of full costs for offset implementation	R255 636	R53 250	R30 000		
1,2	***PRELIMINARY LANDOWNER ENGAGEMENT***								***R50 000***	***R0***	***R0***	***R50 000***	***R53 000***
	Preliminary Consultation	Initial engagement with and consultation with landowner to secure in-principal agreement of offset site	BOT	Item	1,0	Once-off	R20 000	Indicative cost for representative from Management Authority to undertake initial engagements with landowner	R20 000				
	Site Validation and Mapping	Site visit and mapping to refine target areas for conservation and to use as a basis for further planning	BOT	Item	1,0	Once-off	R30 000	Indicative cost for representative from Management Authority to undertake initial engagements with landowner	R30 000				
1,3	***ESTABLISHING OFFSET SITES***								***R1 454 240***	***R155 000***	***R0***	***R1 609 240***	***R1 715 652***
	Landowner agreements	Formalizing lease agreements with landowners	BOT	Item	1,0	Once-off	R15 000	5 hours per site @ R3000 / hr	R15 000				
	Formalising boundaries of offset areas	Preparation of an SG approved "proclamation diagram" by a registered land surveyor to delineate the earmarked offset area (if applicable to a portion of landholdings)	LO	Item	1,0	Once-off	R25 000	Rough estimate / site based on cost estimates from other offset projects.	R25 000				
	Fencing of site	Fencing of Offset sites	LO	Item	3535,6	Per m	R400	Fencing cost based on estimated installation costs for a 5-strand livestock fence around a rectangular property with a 4:1 length to width ratio. It is	R1 414 240				

[3] BOT: Biodiversity Offset Trust / Non-Profit Company; LO: Landowner; MA: Management Authority

1	ESTABLISHMENT PHASE (Cost Estimate for first 3 years)								Annual Cost Allocations			TOTAL COSTS	
Item	Activity	Description	Who?[3]	Unit	Qty	Note (Quantity Estimate)	Cost / Unit	Basis for unit cost estimate	1	2	3	Un-adjusted	Adjusted
								assumed that any more expensive fencing options to address security-related risks would be addressed by the landowner.					
	Prepare management plan	Prepare operational management plan for the offset site in line with the NEM: PAA requirements.	MA	Item	1,0	Once-off	R30 000	To be prepared by ecologist representing the Management Authority		R30 000			
	Technical support and application for PA establishment (submitted to MEC)	Compilation of documentation necessary for PA application	MA	Item	1,0	Once-off	R30 000	To be prepared by ecologist representing the Management Authority		R30 000			
	Submission to deeds office	Prepare notarial deeds (Attorney) for submission to Deeds office	BOT	Item	1,0	Once-off	R10 000	Rough estimate based on a cost of R10K for a property in the City of Cape Town.		R10 000			
	PP (Includes Advertising)	Advertising intention to declare offset areas as a protected area (2 newspapers)	BOT	Item	1,0	Once-off	R75 000	Rough estimate based on typical advertising costs associated with the site declaration process.		R75 000			
	Signage	Installation of information and interpretive signage	MA	Item	1,0	Per item	R10 000	Estimate based on indicative requirements for signage at selected locations around the site		R10 000			
1,4	***SITE MANAGEMENT***								***R185 000***	***R185 000***	***R185 000***	***R555 000***	***R624 304***
	Annual Lease Fee	Leasing of sites from private landowners	LO	Item	1,0	Annual Fee	R75 000	Based on average farm size of 50Ha, and a lease agreement of R125/Ha/Month. This rate was informed by initial discussions with landowners in the area but will need to be refined through further consultation. Note: Property prices range from R20K/Ha in rural settings to	R75 000	R75 000	R75 000		

1	ESTABLISHMENT PHASE (Cost Estimate for first 3 years)								Annual Cost Allocations			TOTAL COSTS	
Item	**Activity**	**Description**	**Who?[3]**	**Unit**	**Qty**	**Note (Quantity Estimate)**	**Cost / Unit**	**Basis for unit cost estimate**	**1**	**2**	**3**	**Un-adjusted**	**Adjusted**
								R150K/Ha near Aalwyndaal where development expectations are high. For a property valued at R30 000/Ha, a 5% lease would translate to R125/Ha.					
	Management Fee	Undertaking site management activities including alien plant control, fire management, security etc	LO	Item	1,0	Annual Fee	R100 000	A management fee of R2000/Ha has also been allocated to ensure that sites are managed according to the management plan. This is based on the assumption that IAP levels would be low, requiring low-cost maintenance work. Such management could be undertaken either by the manager or by a third party.	R100 000	R100 000	R100 000		
	Technical support	Ad-hoc support by management authority	MA	Item	1,0	Annual Fee	R10 000	Indicative allocation based on approximately 2 site visits per year	R10 000	R10 000	R10 000		
1,5	***MONITORING AND REPORTING***								***R15 000***	***R15 000***	***R15 000***	***R45 000***	***R50 619***
	Ecological Monitoring	Alien plant survey to inform management planning	MA	Item	1,0	Annual cost	R15 000	Indicative costs based on a one-day site visit and two days of reporting, shared across these activities	R15 000	R15 000	R15 000		
		Fixed-point photography	MA	Item									
	Internal performance audit	Annual performance audit undertaken per property	MA	Item									
	External performance audit	External performance audit undertaken for a select set of properties	BOT	Item	1,0	Cost every 5 years	R10 000	Indicative costs for consultant to undertake brief site visit and prepare associated report.					
									TOTAL			***R2 598 126***	***R2 810 112***

Annexure 3B. Cost estimates for the Management Phase (Annual costs) for a 50Ha offsite conservation area

2	MANAGEMENT PHASE (Cost Estimate for ongoing management)								TOTAL COSTS	
Item	**Activity**	**Description**	**Who?[4]**	**Unit**	**Quantity**	**Note (Quantity Estimate)**	**Cost / Unit**	**Basis for unit cost estimate**	**Un-adjusted**	**Adjusted (Inflation @ 6%p. a)**
2,1	***OVERSIGHT & COORDINATION***								***R32 100***	***R40 526***
	Administration Fee	Fee for BOT to provide a coordination, oversight and financial management role	BOT	Item	1	Annual Fee	Variable	Based on a 15% of full costs for offset implementation	R32 100	
2,2	***SITE MANAGEMENT***								***R189 000***	***R238 608***
	Management Planning	Update management plan as required	BOT	Item	0,2	Every 5 years	R20 000	Updating on Management Plan to be completed by site manager	R4 000	
	Annual Lease Fee	Leasing of sites from private landowners	BOT	Item	1	Annual Fee	R75 000	Based on average farm size of 50Ha, and a lease agreement of R125/Ha/Month. This rate was informed by initial discussions with landowners in the area but will need to be refined through further consultation. Note: Property prices range from R20K/Ha in rural settings to R150K/Ha near Aalwyndal where development expectations are high. For a property valued at R30 000/Ha, a 5% lease would translate to R125/Ha.	R75 000	
	Management Fee	Undertaking site management activities including alien plant control, fire management, security etc	LO	Item	1	Annual Fee	R100 000	A management fee of R2000/Ha has also been allocated to ensure that sites are managed according to the management plan. This is based on the assumption that IAP levels would be low, requiring low-cost maintenance work. Such management could be undertaken either by the manager or by a third party.	R100 000	

[4] BOT: Biodiversity Offset Trust / Non-Profit Company; LO: Landowner; MA: Management Authority

2	MANAGEMENT PHASE (Cost Estimate for ongoing management)								TOTAL COSTS	
Item	**Activity**	**Description**	**Who?[4]**	**Unit**	**Quantity**	**Note (Quantity Estimate)**	**Cost / Unit**	**Basis for unit cost estimate**	**Un-adjusted**	**Adjusted (Inflation @ 6%p. a)**
	Technical support	Ad-hoc support by management authority	MA	Item	1	Annual Fee	R10 000	Indicative allocation based on approximately 2 site visits per year	R10 000	
2,3	***MONITORING AND REPORTING***								***R25 000***	***R31 562***
	Ecological Monitoring	Alien plant survey to inform management planning	MA	Item	1	Annual cost	R15 000	Indicative costs based on a one-day site visit and two days of reporting, shared across these activities	R15 000	
		Fixed-point photography	MA	Item	0					
	Internal performance audit	Annual performance audit undertaken per property	MA	Item	0					
	External performance audit	External performance audit undertaken for a select set of properties	BOT	Item	1	Cost every 5 years	R10 000	Indicative costs for consultant to undertake brief site visit and prepare associated report.	R10 000	
								TOTAL	**R246 100**	***R310 696***

Annexure 4. Affordability analysis for developing individual properties in Aalwyndal precinct

Property Number	Property Area (Ha)	Developable Area (Ha)	Offset Required (Ha)	No offset required (Ha)	Offset Target (Ha)	Biodiversity Offset Contributions		Conservation Levy (Annual)		Summary of costs / Residential Opportunity		
						Per Property	*Per Developed Area*	Property	*Per Developed Area*	Residential opportunities	Biodiversity Offset Contribution	Conservation levy (monthly)
21238	11,35	1,28	1,26	0,02	5,04	R807 040	*R631 981*	R21 071	*R16 500*	26	R31 599	R69
21239	11,52	1,84	0,09	1,75	0,35	R56 320	*R30 642*	R30 327	*R16 500*	37	R1 532	R69
21240	10,83	6,14	0,00	6,14	0,00	R0	*R0*	R101 376	*R16 500*	123	R0	R69
21241	9,87	2,72	1,66	1,06	6,64	R1 061 760	*R389 923*	R44 930	*R16 500*	54	R19 496	R69
21242	7,42	4,17	2,55	1,62	10,22	R1 634 560	*R391 699*	R68 855	*R16 500*	83	R19 585	R69
21243	10,20	3,38	0,00	3,37	0,01	R1 280	*R379*	R55 704	*R16 500*	68	R19	R69
21244	12,58	1,55	0,63	0,92	2,50	R400 000	*R258 398*	R25 542	*R16 500*	31	R12 920	R69
21245	18,60	5,64	2,85	2,79	11,39	R1 822 080	*R323 121*	R93 044	*R16 500*	113	R16 156	R69
21246	14,80	3,97	2,13	1,84	8,52	R1 362 560	*R342 955*	R65 555	*R16 500*	79	R17 148	R69
21247	11,13	1,48	0,43	1,06	1,71	R273 280	*R184 399*	R24 453	*R16 500*	30	R9 220	R69
21248	14,49	7,42	0,00	7,42	0,00	R0	*R0*	R122 496	*R16 500*	148	R0	R69
21249	14,93	4,39	0,19	4,20	0,76	R122 240	*R27 864*	R72 386	*R16 500*	88	R1 393	R69
21250	10,42	9,06	0,97	8,08	3,89	R622 080	*R68 693*	R149 424	*R16 500*	181	R3 435	R69
21251	18,27	1,74	0,62	1,13	2,46	R394 240	*R226 185*	R28 760	*R16 500*	35	R11 309	R69
21252	8,23	1,78	1,78	0,00	7,13	R1 140 480	*R640 000*	R29 403	*R16 500*	36	R32 000	R69
21254	6,96	2,64	2,32	0,32	9,28	R1 484 160	*R562 608*	R43 527	*R16 500*	53	R28 130	R69
21255	6,93	5,46	4,67	0,80	18,66	R2 986 240	*R546 530*	R90 156	*R16 500*	109	R27 327	R69
21256	6,94	6,93	6,01	0,92	24,06	R3 848 960	*R555 245*	R114 378	*R16 500*	139	R27 762	R69
21257	7,14	5,71	4,84	0,87	19,36	R3 097 600	*R542 582*	R94 198	*R16 500*	114	R27 129	R69
21258	6,82	5,46	4,24	1,22	16,96	R2 714 240	*R497 296*	R90 057	*R16 500*	109	R24 865	R69
21259	6,11	5,00	4,35	0,65	17,38	R2 780 800	*R556 494*	R82 451	*R16 500*	100	R27 825	R69
21260	6,66	2,67	1,89	0,78	7,54	R1 207 040	*R452 414*	R44 022	*R16 500*	53	R22 621	R69
21261	6,73	4,35	3,20	1,15	12,78	R2 045 440	*R470 757*	R71 693	*R16 500*	87	R23 538	R69
21262	6,60	2,66	2,26	0,40	9,05	R1 447 680	*R544 445*	R43 874	*R16 500*	53	R27 222	R69
21263	6,22	1,31	0,31	1,01	1,23	R196 480	*R149 756*	R21 648	*R16 500*	26	R7 488	R69

Property Number	Property Area (Ha)	Developable Area (Ha)	Offset Required (Ha)	No offset required (Ha)	Offset Target (Ha)	Biodiversity Offset Contributions		Conservation Levy (Annual)		Summary of costs / Residential Opportunity		
						Per Property	*Per Developed Area*	Property	*Per Developed Area*	Residential opportunities	Biodiversity Offset Contribution	Conservation levy (monthly)
21264	5,98	3,03	2,30	0,73	9,18	R1 469 440	*R485 605*	R49 929	*R16 500*	61	R24 280	R69
21265	5,73	2,85	1,35	1,50	5,39	R862 720	*R303 134*	R46 959	*R16 500*	57	R15 157	R69
21266	6,25	3,22	3,22	0,00	12,89	R2 062 720	*R640 000*	R53 180	*R16 500*	64	R32 000	R69
21267	6,50	3,86	3,24	0,61	12,97	R2 075 520	*R538 118*	R63 641	*R16 500*	77	R26 906	R69
21268	7,16	4,31	3,68	0,63	14,72	R2 355 840	*R546 218*	R71 165	*R16 500*	86	R27 311	R69
21269	7,68	4,93	3,73	1,19	14,93	R2 389 120	*R484 805*	R81 312	*R16 500*	99	R24 240	R69
21270	6,89	3,95	1,45	2,50	5,80	R928 640	*R234 980*	R65 208	*R16 500*	79	R11 749	R69
21271	8,48	4,92	1,43	3,49	5,72	R915 200	*R185 903*	R81 230	*R16 500*	98	R9 295	R69
21272	12,38	6,46	5,55	0,90	22,21	R3 553 920	*R550 398*	R106 541	*R16 500*	129	R27 520	R69
21273	7,55	7,51	5,34	2,18	21,34	R3 415 040	*R454 611*	R123 948	*R16 500*	150	R22 731	R69
21274	7,74	4,00	3,97	0,03	15,88	R2 540 800	*R635 518*	R65 967	*R16 500*	80	R31 776	R69
21275	7,75	3,49	3,13	0,36	12,51	R2 001 280	*R573 926*	R57 536	*R16 500*	70	R28 696	R69
21276	7,69	7,65	6,06	1,59	24,23	R3 877 120	*R506 681*	R126 258	*R16 500*	153	R25 334	R69
21277	7,78	7,75	6,26	1,49	25,04	R4 007 040	*R517 304*	R127 809	*R16 500*	155	R25 865	R69
21278	7,99	4,94	2,30	2,64	9,19	R1 470 720	*R297 656*	R81 526	*R16 500*	99	R14 883	R69
21279	7,89	1,83	0,98	0,85	3,92	R626 560	*R342 009*	R30 228	*R16 500*	37	R17 100	R69
21280	5,49	1,48	0,92	0,56	3,67	R586 880	*R397 346*	R24 371	*R16 500*	30	R19 867	R69
21281	8,35	8,32	0,00	8,32	0,00	R0	*R0*	R137 280	*R16 500*	166	R0	R69
193/220	6,46	6,42	4,90	1,52	19,59	R3 134 080	*R488 327*	R105 897	*R16 500*	128	R24 416	R69
194/220	5,64	2,64	0,96	1,68	3,84	R614 400	*R232 551*	R43 593	*R16 500*	53	R11 628	R69
195/220	5,42	2,83	1,82	1,01	7,28	R1 164 800	*R411 590*	R46 695	*R16 500*	57	R20 580	R69
196/220	5,36	5,34	2,91	2,44	11,62	R1 859 840	*R348 219*	R88 126	*R16 500*	107	R17 411	R69
197/220	5,48	0,94	0,94	0,00	3,76	R602 240	*R640 000*	R15 527	*R16 500*	19	R32 000	R69
198/220	5,36	4,50	0,00	4,50	0,00	R0	*R0*	R74 299	*R16 500*	90	R0	R69
199/220	5,34	2,20	0,89	1,31	3,55	R567 680	*R258 271*	R36 267	*R16 500*	44	R12 914	R69
200/220	6,18	1,17	0,74	0,43	2,97	R474 880	*R406 575*	R19 272	*R16 500*	23	R20 329	R69
201/220	6,53	3,29	1,26	2,03	5,02	R803 840	*R244 328*	R54 285	*R16 500*	66	R12 216	R69

Property Number	Property Area (Ha)	Developable Area (Ha)	Offset Required (Ha)	No offset required (Ha)	Offset Target (Ha)	Biodiversity Offset Contributions		Conservation Levy (Annual)		Summary of costs / Residential Opportunity		
						Per Property	*Per Developed Area*	Property	*Per Developed Area*	Residential opportunities	Biodiversity Offset Contribution	Conservation levy (monthly)
202/220	6,03	2,54	1,89	0,65	7,56	R1 210 240	*R477 224*	R41 844	*R16 500*	51	R23 861	R69
203/220	6,05	2,13	0,16	1,96	0,66	R104 960	*R49 346*	R35 096	*R16 500*	43	R2 467	R69
205/220	4,24	1,94	1,46	0,49	5,82	R931 200	*R479 753*	R32 027	*R16 500*	39	R23 988	R69
206/220	2,92	1,18	0,92	0,25	3,69	R590 080	*R501 769*	R19 404	*R16 500*	24	R25 088	R69
207/220	3,33	1,62	0,07	1,55	0,28	R44 800	*R27 671*	R26 714	*R16 500*	32	R1 384	R69
208/220	5,78	2,13	1,64	0,49	6,55	R1 047 680	*R493 026*	R35 063	*R16 500*	43	R24 651	R69
209/220	5,16	3,65	3,65	0,00	14,60	R2 336 640	*R640 000*	R60 242	*R16 500*	73	R32 000	R69
210/220	7,08	5,40	2,03	3,37	8,11	R1 297 920	*R240 445*	R89 067	*R16 500*	108	R12 022	R69
211/220	8,42	6,58	5,22	1,36	20,88	R3 340 800	*R507 566*	R108 603	*R16 500*	132	R25 378	R69
212/220	7,07	5,62	2,64	2,98	10,55	R1 687 680	*R300 406*	R92 697	*R16 500*	112	R15 020	R69
213/220	6,87	5,64	4,52	1,12	18,07	R2 890 880	*R512 840*	R93 011	*R16 500*	113	R25 642	R69
214/220	7,39	3,16	2,69	0,48	10,74	R1 719 040	*R543 484*	R52 190	*R16 500*	63	R27 174	R69
215/220	5,91	2,84	1,34	1,50	5,34	R855 040	*R301 070*	R46 860	*R16 500*	57	R15 054	R69
216/220	6,88	3,05	3,01	0,05	12,02	R1 923 840	*R630 354*	R50 358	*R16 500*	61	R31 518	R69
217/220	6,93	6,92	0,00	6,92	0,00	R0	*R0*	R114 114	*R16 500*	138	R0	R69
256/220	5,68	1,29	1,21	0,08	4,86	R776 960	*R600 897*	R21 335	*R16 500*	26	R30 045	R69
6/221	27,84	8,74	8,74	0,00	34,96	R5 593 600	*R640 000*	R144 210	*R16 500*	175	R32 000	R69
RE/178/220	9,79	3,76	1,01	2,76	4,02	R643 200	*R170 927*	R62 089	*R16 500*	75	R8 546	R69
RE/252/220	6,91	3,82	2,57	1,25	10,30	R1 647 360	*R431 020*	R63 063	*R16 500*	76	R21 551	R69
RE/4/221	13,20	8,01	1,12	6,89	4,49	R718 720	*R89 705*	R132 198	*R16 500*	160	R4 485	R69