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December 2017



Executive Summary

Final Environmental Impact Report: Walmer Housing Development, Erf 11305, Port Elizabeth

1. Introduction

The Nelson Mandela Bay Municipality (NMBM) proposes to construct housing and associated facilities and infrastructure on erf 11305, in Walmer (see locality in Figure 3), to accommodate the overflow of residents from Walmer Gqebera. Authorisation was previously granted by the then Department of Economic Affairs, Environment and Tourism (DEAET) in April 2006 to a private developer for a change in land use and construction of housing units on erf 11305. This authorisation has since expired, the land has been purchased by the NMBM, and the nature of the proposed development has changed, necessitating a new application for environmental authorisation

SRK Consulting (SRK) has been appointed by the NMBM, as the independent environmental consultants, to conduct the Environmental Impact Assessment (EIA) in terms of the National Environmental Management Act 107 of 1998 (NEMA), as amended, and the Environmental Impact Assessment (EIA) Regulations, 2010, for the proposed housing development.

In July 2014 an application to commence the current EIA process was submitted to the Department of Economic Affairs, Environmental Affairs and Tourism (DEDEAT).

2. Approach to the Study

The proposed development is subject to environmental authorisation from DEDEAT in terms of the NEMA. As such, an EIA is required and this Final Environmental Impact Report (FEIR) presents an important milestone in the EIA process.

The first step of the EIA process (see Figure 1), the Scoping Study, has been completed and included a Public Participation Process (PPP). The Scoping process is aimed at identifying issues and concerns of Interested and Affected Parties (IAPs). The objective of the Scoping Study was to identify those issues and concerns that must be

investigated in more detail and included a Plan of Study for the EIA which was approved on 19 June 2016.

The second phase of the EIA commences with the Draft Environmental Impact Report, which was released for public comment. All comments received on the content of the DEIR have been incorporated into the Final Environmental Impact Report (FEIR) (this report) which will be submitted to DEDEAT for a decision on whether to grant or refuse Environmental Authorisation. The aim of this report is to present the results of investigations of the issues and concerns identified in the Scoping Study, identify and assess the potential impacts of the development and provide recommendations with the objective of minimising negative environmental impacts and maximising benefits.

The following activities have been completed as part of the EIA in accordance with the requirements of the NEMA EIA regulations:

- Notification of the development in "Die Burger" newspaper on 22 August 2014, and placement of an on-site poster on 8 September 2014;
- Distribution of the Background Information Document (BID) to identified IAPs, stakeholders and residents;
- Collation of public and IAP comments on the BID and notifications, including responses to these issues;
- Preparation and distribution of the Draft Scoping Report (DSR) to public venues for review by IAPs, and submission to authorities;
- Inclusion in the DSR of issues that were raised (see Table 4.2 in the EIR);
- Distribution of an Executive Summary of the DSR to all IAPs registered for this project and provision of a 40-day comment period (30 March – 14 May 2015);

- Compilation of all comments received on the DSR and integration thereof into the Final Scoping Report (FSR) (see Table 4.2 in the EIR) ;
- Distribution of an Executive Summary of the FSR to all IAPs registered for this project and distribution of the FSR to public venues for review by IAPs during a 21-day comment period (9 June – 2 July 2015);
- Submission of the FSR and the Plan of Study for the EIA to DEDEAT for consideration and approval. Prior to issuing an approval for the FSR, DEDEAT requested certain amendments to be made, hence the distribution of an Amended FSR for comment;
- Compilation of all comments received on the FSR and integration of these comments into an Amended FSR (see Table 4.3 in the EIR);
- Distribution of an Executive Summary of the Amended FSR to all IAPs registered for this project;
- Distribution of the Amended FSR to public venues for review by IAPs during a 21-day comment period (29 March – 19 April 2016);
- Submission of the Amended FSR and the Plan of Study for the EIA to DEDEAT for consideration and approval;
- Compilation of all comments received on the Amended FSR and integration of these comments into the Draft EIR (see Table 4.4 of the EIR);
- Distribution of an Executive Summary of the DEIR to all registered IAPs and distribution of the DEIR to public venues for a 40-day review by IAPs (10 October – 20 November 2017);
- Conducting a Project Team Interaction Day (including key specialists) on 13 November 2017 at the Walmer Public Library for IAPs who required clarification of specific issues in order to submit comprehensive comments on the DEIR (Attendance Register included in Appendix E3 of the EIR);
- Inclusion of original correspondence from IAPs on the DEIR and incorporation of these into the FEIR (see Table 4.5 of the FEIR);
- Distribution of FEIR to public venues for review by IAPs, and submission to relevant authorities and provision of a 30-day comment period (8 December 2017 – 29 January 2018); and
- Submission of the FEIR to DEDEAT for a decision regarding environmental authorisation.

The activities that must still be conducted as part of the Assessment process are described below:

- IAP notification of DEDEAT's decision and appeal process once received.

3. Motivation for the Proposed Development

Housing and service delivery is a key challenge facing the Nelson Mandela Bay Municipality (NMBM). According to the NMBM's Metropolitan Strategic Development Framework - the NMBM has a housing backlog of 72,000 units (23,000 units in informal areas and 49,000 backyard shacks) and has identified the provision of quality housing and the structured upgrading of informal settlements as one of its main objectives.

The area of Walmer was identified in the NMBM IDP as a restructuring zone for social housing and Walmer Gqebera was identified as a precinct where residential expansion needs to take place. Ward 4 of the NMBM, of which Gqebera makes up the main residential area, has an estimated population of approximately 26,000 people (as per 2011 Census data), making up approximately 2% of the total population of the NMBM municipal area.

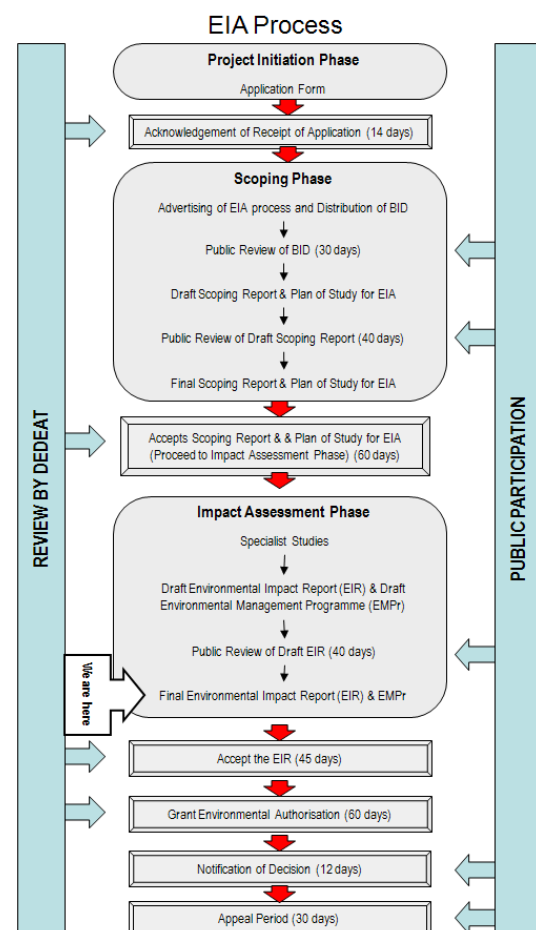


Figure 1: EIA Process

The proposed development aims to alleviate the population pressure and to lower housing density in the township by providing formal housing and services. In order to achieve this, additional land outside of the current Walmer Gqebera footprint is required to accommodate the overflow of residents. Erf 11305 is one of a few undeveloped

municipally owned plots in the vicinity of Walmer Gqebera, with relatively direct access to existing bulk services infrastructure connections.

4. Development Proposal

The NMBM proposes to construct a mixed typology housing development together with associated facilities and infrastructure on erf 11305, Walmer, to cater for the overflow of residents currently living in informal settlements in the Walmer Gqebera area. Up to 1,600 residential units are proposed (see preliminary layouts in Figure 4 and Figure 5), along with associated community facilities and services infrastructure. The development will connect onto existing bulk services infrastructure in the area, apart from water supply, for which an additional pipeline connecting to the Emerald Hill Reservoir will be required. The proposed site is 43.74 ha in size and located on municipally owned land which has been previously disturbed (through

activities such as farming).

The urban design for the project is currently at Preliminary Subdivisional Plan Stage, which has as far as possible accommodated social sensitivities (relating to socio-economic differences between the adjacent affluent Walmer Heights residential area and the proposed development), forest identified on the site (as per the legal requirements) as well as low areas of the site where stormwater would accumulate. Four provisional layout alternatives considered were presented in the Scoping Stage of in the EIA, two of which (alternatives 3 and 4, with minor modifications and now labelled as layout Option A and layout Option B), have been assessed in the EIR. The other two options, based on the previously authorised layout for the property, are no longer considered to be viable as described in Section 2.4.2 of the Amended FSR and therefore have not been assessed in the EIR.

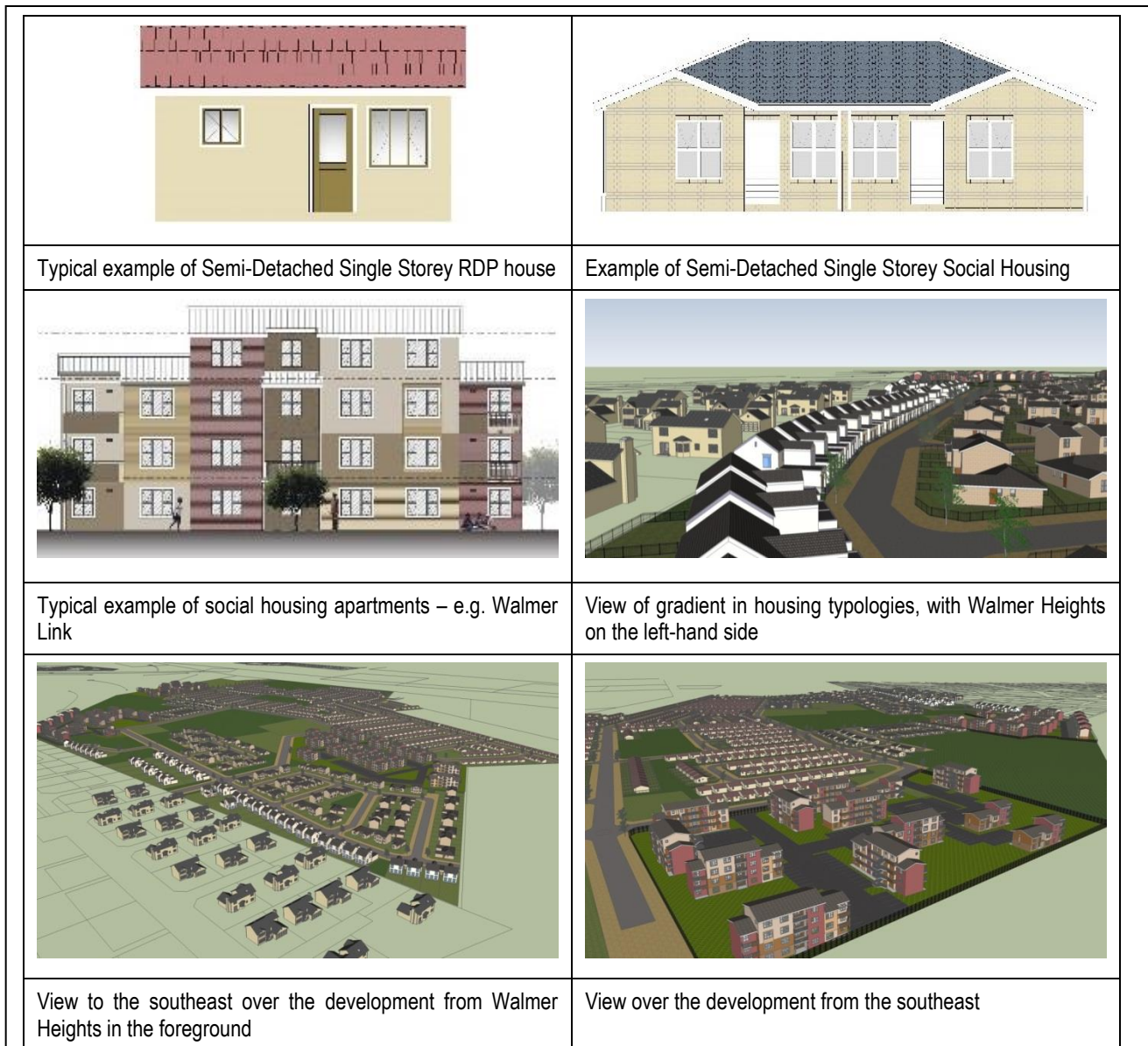


Figure 2: Images of what the proposed development is anticipated to look like

Housing Typologies

Each of the layout alternatives provides for the development of a mix of housing typologies to accommodate beneficiaries to be relocated from informal settlements in Walmer Gqebera and in the case of Open Market houses. The eligible beneficiaries will receive a formal structure (Free basic house/FBH) built in accordance with NHBRC Standards and National Building Regulation. The remainder of the units will be offered to beneficiaries who qualify for Socially Housing, GAP Housing and Open Market once the needs of the target groups are met.

A portion of the layout abutting the suburb of Walmer Heights has been set aside for open market units, social housing and GAP housing (possibly Finance Linked Individual Subsidy Programme (FLISP) units) to allow for a transition area between the Free Basic House and Walmer Heights. Images of what the development is anticipated to look like are provided in Figure 2, and descriptions of the proposed housing typologies are provided below.

Free Basic House/RDP

- Fully State Subsidised Housing;
- Beneficiaries will depend entirely on being housed by the state without any expectation of making financial contributions towards the house/services/ transfer/ registration costs for the property to be received; and
- Units will be free standing and semi-detached single storey units

GAP/FLISP Housing

- Partially subsidised housing. The state subsidy is supplemented by private funding;
- For financially employed individuals who can afford mortgage loans of up to R300,000; and
- Units will be detached, Semi-detached, single and/or double storey housing.

Social Housing

- Units offered for rent to beneficiaries earning between R1,500 and R15,000 per month. Policy stipulates that the rentals paid should not exceed 30% of gross income. This would determine the size of unit allocated to the beneficiary.
- The units will be owned and managed by an accredited Social Housing Institution that will hold the stock for a minimum of 15 years, and may either re-finance for another 15 years or sell it off to tenants;
- 3- 4 storey apartment buildings, in an access controlled complex, similar to Walmer Link.

Open / GAP market housing

- Stand-alone units priced at above R400,000, for beneficiaries earning above R15,000 per month, with

those properties adjacent to Walmer Heights and north of the 12 m internal road providing future connection to Arlington Race Course property being designated for development to a minimum value of R620,000.

Both layout options are based on survey information regarding the distribution of forest on the site, as well as adoption of the concept of a transition zone (between 276 and 300 m wide) to act as a buffer between Walmer Heights and the areas allocated for free basic houses. This transition zone is intended to address socio-economic concerns of the adjacent higher income residential areas, while still in line with national policy for integrated residential development, and is made up of the following:

- The free basic houses/ RDP Units are located closer to Victoria Drive way from Walmer Heights;
- A transition zone comprising Social Housing Units, a school site and public open space (forest clumps) is provided along the southern-edge of the Golf Course; and
- The transition area between the RDP units and Walmer Heights ranges from 276 to 321 m wide, and is made up of FLISP/GAP housing, business and public open space areas, and Open Market Housing. The sites directly abutting Walmer Heights are proposed for housing priced over R620,000.

The development will be an integrated settlement including different land use zones (in accordance with the Section 8 Scheme regulations, which are applicable to the area) in addition to the housing component.

Access Roads

Two main access routes to the site are proposed, both of which will be 6 m wide (16 m road reserves) tarred road surfaces. Access to the majority of the area will take place from Victoria Drive, where a 60 – 80 m length of road is proposed from an access point on Victoria Drive. This road will service the southern section of the site, including all the Free Basic House units.

A second access road, from an existing road linking up to Beethoven Drive in Walmer Heights, is proposed for access from the northern side of the site, and will service the freehold and Gap housing areas, as well as the social housing developments in that portion of the site. No direct access through to the southern portion of the site will be provided from the Walmer Heights access route.

The road design also allows for possible future linkages to adjacent areas to the east and west of the site, should these sites be developed for public facilities

Stormwater management

Stormwater from the site will be accommodated in three on-site stormwater detention ponds (as indicated on the development layout plans), which will be fenced to prevent access by the public. From the on-site ponds the stormwater to be conveyed via a pipeline to the edge of the

site and from there in a vegetatable concrete block lined channel into the new detention pond situated in the southern portion of the Walmer golf course.

5. Findings & conclusions

The following Specialist Studies were conducted for the EIA Phase of the assessment, the full reports for which are included in Appendix K (bound separately as Volume 2 of the DEIR):

- Socio-economic Impact Assessment – Appendix K1;
- Traffic Impact Assessment – Appendix K2;
- Palaeontological Impact Assessment (letter of exemption) – Appendix K3;
- Archaeological Impact Assessment (Phase 1) – Appendix K4;
- Wetland and aquatic environment Impact Assessment – Appendix K5;
- Ecological Impact Assessment – Appendix K6;
- Forest mapping survey – Appendix K7; and
- Historical Structures Assessment – Appendix K8.

The impact significance ratings for the various impacts that were identified, both before and after application of mitigation (for negative impacts) or enhancement for positive impacts are summarised in

Table 2 below. For full descriptions of the impacts and their significance ratings, please refer to Chapter 5 of the FEIR.

Key observations with regard to the overall impact ratings, assuming that the recommended mitigation measures will be effectively implemented, are as follows:

- The significance of the destruction of **heritage resources** including existing historical structures older than 60 years within the development footprint was rated to be between LOW (-ve) and MEDIUM (-ve) significance. No mitigation measures are possible, however recommendations are provided;
- Clearing of vegetation during construction will result in the associated habitat and species it supports being lost and fragmented. This may include species of special concern, and will also result in increased opportunities for proliferation of invasive alien vegetation. The significance of these **ecological impacts** ranges from MEDIUM to VERY LOW (-ve);
- **Positive socio-economic** impacts of LOW to MEDIUM (+ve) significance are anticipated to result from job creation, local economic growth, and development of infrastructure during construction. The impacts of employment and local economic growth would remain of MEDIUM (+ve) significance during

operation of the development. The impact of reduced risk of land invasion resulting from development of the site is anticipated to be HIGH (+ve), and a MEDIUM (+ve) impact resulting from the contribution to meeting the housing need, unlocking the potential for continuation of redevelopment of Gqebera, is expected;

- **Negative socio-economic** impacts on the municipal rates and tax base from surrounding high property value areas (which could potentially become a LOW (+ve) impact) should the development become a positive rateable asset, are predicted. A MEDIUM to LOW (-ve) impact on property values in Walmer Heights is predicted (depending on the development option and mitigation measures implemented). Safety and security impacts of MEDIUM to LOW (-ve) significance on surrounding areas are also predicted. These negative impacts are predicted to be higher for Option A than for Option B, as the layout for this option is more closely aligned with the recommendations of the socio-economic report;
- It is anticipated that both development options will increase the **traffic** on nearby roads and intersections, both during construction and operation. This could lead to traffic congestion, and deterioration of road condition and traffic safety. During construction these impacts are anticipated to be of VERY LOW (-ve) significance, and LOW to VERY LOW (-ve) significance during operation. Recommendations are provided by the specialists regarding design, road upgrades traffic and management measures;
- Vegetation clearing and disturbance of soils during construction will leave them vulnerable to **erosion** by water and wind. There is also a risk of contamination of soils and stormwater as a result of spills or leaks of hazardous materials. This impact was rated as INSIGNIFICANT (-ve);
- The project area is subject to large volumes of **stormwater** from the surrounding developed areas. The increase in hardened surfaces associated with the development will result in increased runoff. The impact was rated as VERY LOW (-ve) during operation assuming proper planning and management;
- During construction, predicted impacts on **air quality** (due to dust generation), **waste management** (due to litter, dumping etc.), **noise, and visual character** are expected to be VERY LOW to INSIGNIFICANT (-ve). During operation, impacts due to lack of waste management, noise disturbance, and changes to visual character (due to lighting, and development of a site that is currently undeveloped), are expected to be of VERY LOW (-ve) significance;
- **Fire risks** currently affecting the site due to the large component of alien invasive vegetation, are anticipated to reduce and result in a LOW (+ve)

impact during operation due to clearing and management of alien invasive vegetation;

- The **no-go option** would see the site not being developed as proposed, and remaining unmanaged. Impacts associated with this scenario include HIGH (-ve) ecological impacts (due to ongoing invasion by alien invasive species, resulting in loss of habitat and species of special concern). From a socio-economic perspective, the housing need would remain HIGH (-ve) impact, increasing pressure on other areas to meet the housing need, and limiting the potential for redevelopment of Gqebera until alternative land parcels have been authorised for development. Security and land invasion risks would remain a MEDIUM (-ve) impact as the undeveloped site continues to provide refuge to criminals and frustration regarding slow housing delivery escalates. A LOW (+ve) impact on the rates and tax base would however result from increasing property rates and taxes due to the lack of negative impact on adjacent property values. Traffic impacts of a LOW to MEDIUM (-ve) significance would continue; and
- In terms of **layout alternatives**, overall, the significance of negative impacts associated with Option B is equal to, or in the case of terrestrial ecology, socio-economic and archaeological impacts, lower than that for Option A. For both options, all impacts could be reduced to MEDIUM (-ve) significance or lower, with effective mitigation.

Key recommendations, considered to be essential, are:

- Damage or destruction of forest trees must be avoided. Where this is not possible, the necessary permits must be obtained in advance from DAFF;
- Protected forest clumps to be conserved (as per the site layout) must be demarcated prior to site clearing and all personnel on site must be educated on the importance of the protection of forest on site;
- The necessary destruction / relocation permits for protected species must be obtained from DEDEAT prior to commencement of vegetation clearing;
- Plant Species of Special Concern that require removal are to be marked by a botanist and removed (search and rescue) prior to construction;
- The necessary Heritage destruction permits, for destruction of historical structures, must be obtained from the ECPHRA prior to commencement of construction in these areas;
- A search and rescue operation for fauna (including reptiles) must be initiated prior to the commencement of any construction;
- Monitor areas surrounding the development for signs of encroachment, dumping and wood cutting, and prevent these activities;
- Periodical site inspections that inspect the effectiveness of the stormwater ponds and control system and specifically records occurrence or not of any erosion on site or downstream;
- Alien invasive vegetation must be cleared from the site and be managed during both construction and operation of the development;
- Disturbed areas must be revegetated with appropriate indigenous vegetation where possible;
- Stormwater from the final outlets should be managed using suitable structures such as swales, gabions and rock rip-wrap so that any run-off from sites is attenuated prior to discharge;
- Clearing must take place in a phased manner;
- Regular municipal waste collection to be provided;
- Strict implementation of the NMBM noise bylaws
- Ensure construction vehicles are visible and make use of Victoria Drive to gain access to site;
- Install traffic warning signage and ensure adequate sight distance along affected routes;
- Implement public transport and NMT facilities and services, e.g. sidewalks, street lighting, public transport feeder services;
- Upgrades to key intersections and other traffic management measures to accommodate the additional flow, as per the recommendations in the traffic impact assessment;
- The area directly adjacent Walmer Heights must be reserved for higher income households, with lower priced housing along Victoria Drive;
- The layout should respond to pricing contours and permeability of the development should be limited. This would include relocating the business site from the northern section of the site closer to Victoria Drive;
- Dual access to the development with lower density, higher priced units making use of a Walmer heights link and higher density, lower priced units making use of a Victoria Drive link; and
- Use defensible space through design features that repel criminal activity (e.g. fences, gates, and locks).

6. Way Forward

The public participation programme has given IAPs an opportunity to assist with the identification of issues and potential impacts, and further opportunities are provided as indicated below.

The Executive Summary (this document) of the Final Environmental Impact Report has been distributed to all registered IAP's. A printed copy of the report will be made available **at Walmer Public Library** (Main Road, Walmer, Port Elizabeth), as well as the **Gqebera Public Library**.

The report can also be accessed as an electronic copy on SRK Consulting's webpage via the 'Public Documents' link: <http://www.srk.co.za/en/za-walmer-housing-development-erf-11305-port-elizabeth>

Private Bag X5001, Greenacres, 6057
Email: Nicole.Gerber@dedea.gov.za
Fax: (041) 508 5865

Written comment on this FEIR should be sent to DEDEAT directly (Reference Number ECm1/C/LN2/M/39-2014), by **17h00 on 29 January 2018** to:

Ms Nicole Gerber
Department of Economic Development, Environmental
Affairs and Tourism

A copy of any comments must also be forwarded to:

Wanda Marais
SRK Consulting
PO Box 21842, Port Elizabeth, 6000
Email: wmarais@srk.co.za
Fax: (041) 509 4850

Table 1: Provisional timeframes for EIA milestones to be completed

Stage / Activity	Target Dates	
	Start	End
Distribute Final EIR for 30 day comment period	8 December 2017	29 January 2018
DEDEAT decision making on Final EIR (105 days)	30 January 2018	21 May 2018

Table 2: Summary of impact significance ratings for the Walmer housing development

Impact group	Impact Description	+/ -	Significance without management		Significance with management		
			Option A	Option B	Option A	Option B	
CONSTRUCTION							
Archaeological	A1: Destruction of archaeological resources	-	Low		Very low		
	A2: Impact on heritage structures	QBE 1 – Dipping tank	-	Low		N/A	
		QBE 2 - Ruin	-	Medium		N/A	
		QBE 3 - Ruin	-	Medium	Low	N/A	
		The historical Association of the Site	-	Medium		N/A	
Commonages, Garden Planting and Tree Groves	-	Medium		N/A			
Paleontological	P1: Destruction of palaeontological resources	-	Very low		N/A		
Terrestrial Ecology	E1: Loss of habitat and removal of vegetation	-	Medium		Low	Very low	
	E3: Loss of CBAs and habitat fragmentation	-	Medium		Medium	Low	
	E4: Loss of Species of Special Concern	-	Medium	Low	Low	Very low	
	E5: Spread of alien invasive species	-	Low		Very low		
Socio-economic	SE1: Employment opportunities	+	Medium		Medium		
	SE3: Local economic growth	+	Medium		Medium		
	SE5: Infrastructure investment and development	+	Low		N/A		
Traffic	T1: Increased Traffic on existing roads	-	Low		Very low		
	T3: Deterioration of Road Condition	-	Low		Very low		
	T5: Increased traffic safety risks	-	Low		Very low		
Stormwater	SW1: Spread of pollution and erosion	-	Insignificant		Insignificant		

Impact group	Impact Description	+/ -	Significance without management		Significance with management	
			Option A	Option B	Option A	Option B
Waste	W1: Spread of litter and waste	-	Very low		Insignificant	
Air Quality	AQ1: Dust generation	-	Very low		Insignificant	
Visual	V1: Visual impact	-	Low		Very Low	
Noise	N1: Noise disturbance	-	Very Low		Insignificant	
Fire	F1: Fire risk	-	Insignificant		Insignificant	
OPERATION						
Ecology	E2: Loss of habitat & Removal of Vegetation	-	Medium		Very low	
	E3: Loss of CBAs and habitat fragmentation	-	Medium		Medium	Low
	E4: Loss of Species of Special Concern	-	Medium	Low	Low	Very low
	E5: Spread of alien invasive species	-	Low		Very low	
Socio-economic	SE2: Employment opportunities	+	Medium		N/A	
	SE4: Local economic growth	+	Medium		N/A	
	SE6: Rates and tax base	+/-	Very high (-)	High (-)	Low (+)	
	SE7: Decrease in property values	-	High	Medium	Medium	Low
	SE8: Contribution to housing need	+	Medium		N/A	
	SE9: Security issues	-	Medium		Medium	Low
	SE10: Reduced risk of illegal invasion	+	Medium		High	
Traffic	T2: Increased pedestrian and traffic volumes on existing roads	-	Medium		Low	
	T4: Deterioration of road condition	-	High		Low	
	T6: Increased traffic safety risks	-	High		Very low	
	T7: Impacts on operational capacity	-	High		Very low	
Stormwater	SW2: Spread of pollution, flooding and erosion	-	Medium		Very low	
Waste	W2: Spread of litter and waste	-	Low		Very low	
Visual	V2: Visual impact during operation	-	Low		Very low	
Noise	N2: Noise disturbance	-	Low		Very low	
Fire	F2: Fire risk	+	Very Low		Low	
NO-GO OPTION						
Ecology	E2: Loss of habitat & Removal of Vegetation	-	High		N/A	
	E3: Loss of CBAs and habitat fragmentation	-	High		N/A	
	E4: Loss of Species of Special Concern	-	High		N/A	
	E5: Spread of alien invasive species	-	High		N/A	
Socio-economic	SE6: Rates and tax base	+	Low		N/A	
	SE8: Contribution to housing need	-	High		N/A	
	SE9: Security issues	-	Medium		N/A	
	SE10: Reduced risk of illegal invasion	-	Medium		N/A	
Traffic	T3: Increased pedestrian and traffic volumes on existing roads	-	Low		N/A	

Impact group	Impact Description	+/ -	Significance without management		Significance with management	
			Option A	Option B	Option A	Option B
	T4: Deterioration of road condition	-	Low		N/A	
	T6: Impacts on traffic safety	-	Low		N/A	
	T7: Impacts on operational capacity	-	Low		N/A	
Waste	W2: Spread of litter and waste	-	Medium		N/A	
Visual	V2: Visual impact	-	Very Low		N/A	
Stormwater	SW2: Spread of pollution, flooding and erosion	-	Very Low		N/A	
Fire	F2: Fire risk	-	Low		N/A	

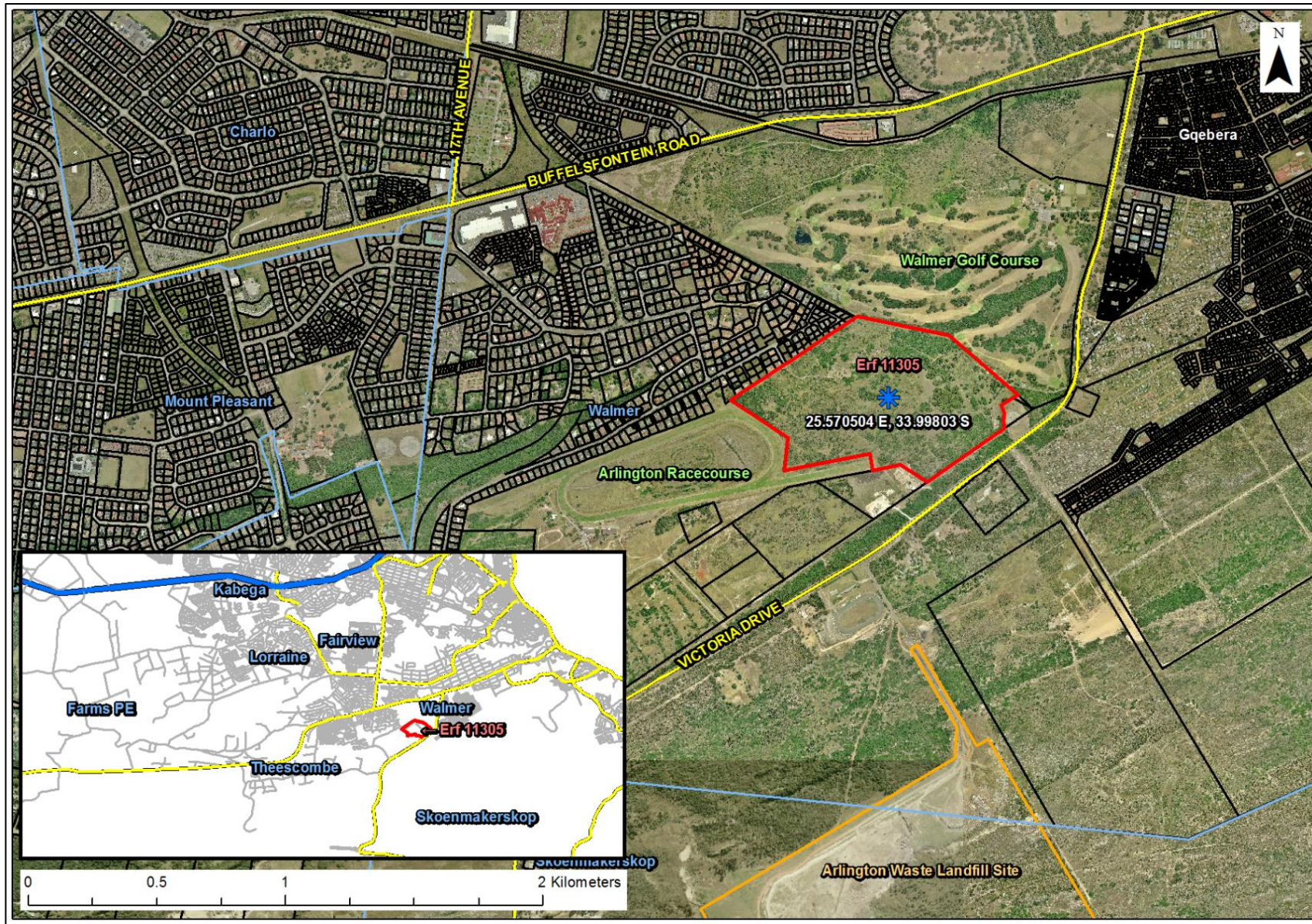


Figure 3: Site locality plan for the proposed Walmer Housing Development

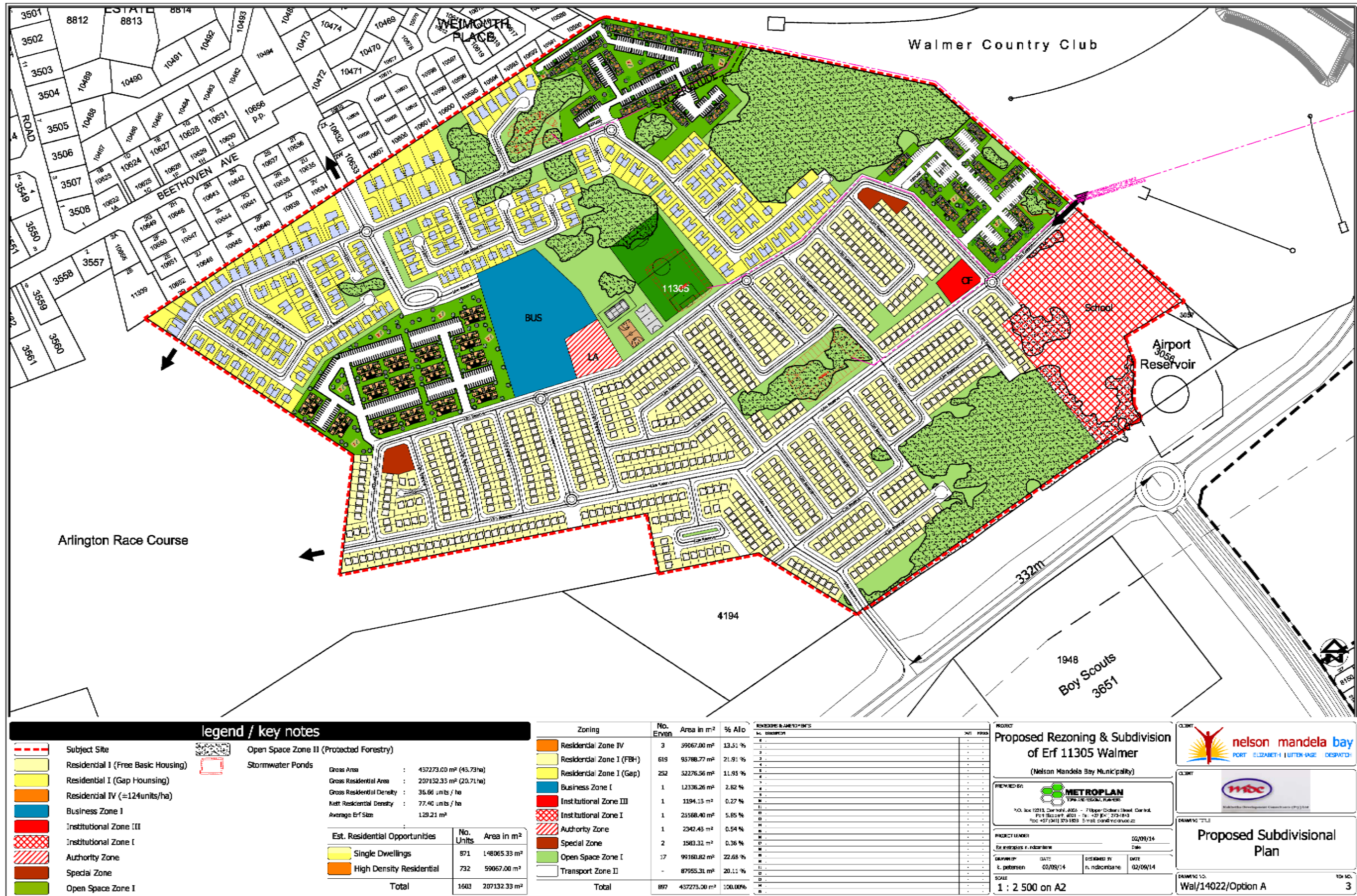


Figure 4: Preliminary site development plan for Walmer erf 11305 housing development – Development Option A

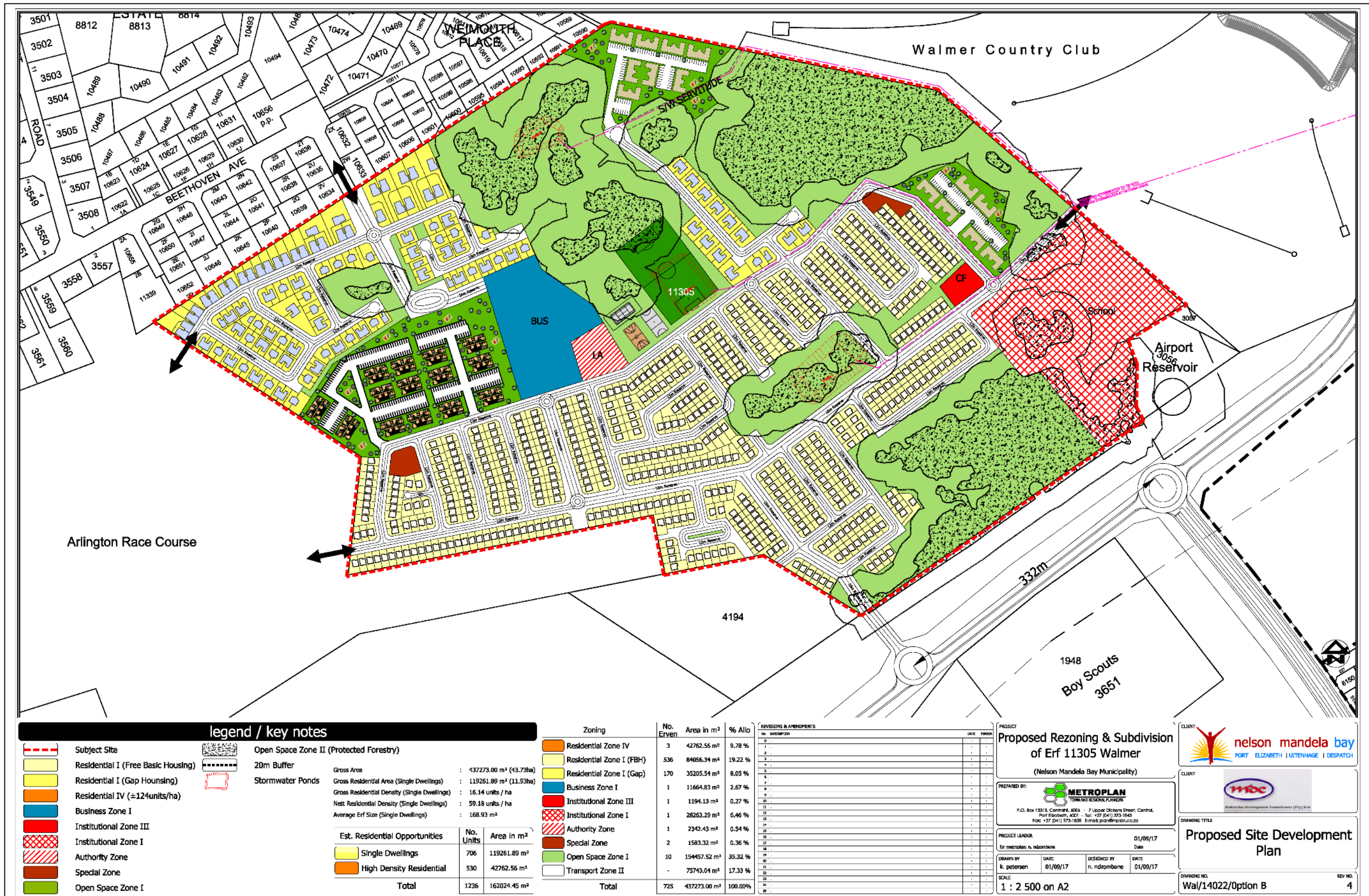


Figure 5: Preliminary site development plan for Walmer erf 11305 housing development – Development Option B