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Environmental Management and Impact Assessment
Omgewingsbestuur en Impakbeoordeling

PROPOSED HOUSING DEVELOPMENT AND WELLNESS CENTRE, ERF 1612, KAKAMAS, KAI! GARIB MUNICIPALITY, NORTHERN CAPE

DRAFT BASIC ASSESSMENT REPORT

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PROPOSED HOUSING DEVELOPMENT AND WELLNESS CENTRE, ERF 1612, KAKAMAS, KAI! GARIB MUNICIPALITY, NORTHERN CAPE

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EXECUTIVE SUMMARY

Introduction

It is proposed that Erf 1612, Kakamas be rezoned and sub-divided to accommodate thirty seven (37) residential units and a wellness centre, including associated infrastructure. The property is approximately 2.9268ha in size.

The site is currently vacant, with only the existing "waterwese saal" and parking located on the site. The "waterwese saal" will be demolished to make way for the wellness centre.

The current zoning on the property is Institutional zone II (Erf 1612). The newly proposed zonings will be Residential II (townhouses) and Special zone (wellness centre).

Services:
The services to the proposed development are described in the Services Report (**Appendix D2**).

- Roads and access:

Internal roads shall be 6m in width consisting mainly of access roads to residential units. Roads will be black top. There will be direct access from the existing Diamant Street. The entrance will be controlled by a Security Entrance Gate on Diamant Street.

- Water:

Internal water pipes shall be Ø 75mm and Ø 90mm uPVC Class 9, connected to the existing Ø 100mm municipal bulk water supply line running along the western and eastern boundary. A 110mm connection will be made on the existing supply line.

The development is expected to generate an average flow of 0.44 l/s with an instantaneous peak flow of 3.88 l/s.

- Sewerage:

There is currently no sewage reticulation system. The development will require a sewage reticulation network, including house connections and a local sewage purification system. The internal sewer system will consist of Ø 160mm uPVC Class 34 sewer pipes for general reticulation with Ø 110mm uPVC Class 34 house connections. The development is expected to discharge an estimated peak sewage flow of 1.53 l/s that will be treated by the Bio- Filter Rotating Biological Contactor Sewage Purification Plant. Municipal services will be required for the disposal of the sludge as required once the plant is operational.

The sewerage disposal systems, will consist of internal sewage reticulation systems as well as Purification plant. On site treatment of sewage will eliminate typical sewage runoff, therefore not impacting the municipal sewerage reticulation system.

The average daily flow is determined to be 35 m3/day at typical domestic raw sewage strength of 600mgCOD/l anticipated, equating to a raw sewage organic load of 21 kgCOD/day.

- Solid waste:

Solid waste will be collected and handled by the municipality as this development falls within the urban edge and the general area of service by the municipality.

- Stormwater:

The storm water peak run-off was determined by considering the average rainfall over the drainage area for the indicated storm events. Drainage through the site mainly consists of two minor run-off collection routes occurring naturally from the north and west of the property. The catchment areas contributing to these storm water run-offs are however relatively small and result in easily manageable flows across the site.

Storm water run-off will be handled overland and accommodated within the proposed roads while complimenting the existing natural drainage scenario within and around the property. Storm water will therefore generally still follow current drainage paths to existing infrastructure. Areas at risk of erosion due to storm water run-off within the site will be suitably stabilised to prevent any erosion damage that might occur.

- Electricity:

Erf 1612 in Kakamas is an undivided stand and thus was not included in the electrical reticulation master planning.

The existing municipal miniature substation in Diamond Str is theoretical loaded to 65% of its capacity and thus cannot accommodate the expected additional loading due to the development.

Electrical distribution for the development can be facilitated through the extension of the municipal medium voltage network in Diamond Street and the installation of a dedicated miniature substation in the centre of the development. The internal low voltage reticulation and service connections will be connected to the proposed miniature substation. The cost for the provision of the electrical services will be for the account of the developer.

The expected maximum demand of the proposed development should have no significant effect on the Notified Maximum Demand of Kakamas and thus no further financial contribution is expected from the developer.

Environmental Requirements

The National Environmental Management Act (NEMA, Act 107 of 1998), as amended, makes provision for the identification and assessment of activities that are potentially detrimental to the environment and which require authorisation from the competent authority based on the findings of an Environmental Assessment. NEMA is a national act, which is enforced by the Department of Environmental Affairs (DEA). According to the regulations of Section 24(5) of NEMA, authorisation is required for the following:

Government Notice R983 (Listing Notice 1)::

12: The **development** of;

(i) canals exceeding 100 square metres in size;
(ii) channels exceeding 100 square metres in size;
(iii) bridges exceeding 100 square metres in size;
(iv) dams, where the dam, including infrastructure and water surface area, exceeds 100 square metres in size;
(v) weirs, where the weir, including infrastructure and water surface area, exceeds 100 square metres in size;
(vi) bulk storm water outlet structures exceeding 100 square metres in size;
(vii) marinas exceeding 100 square metres in size;
(viii) jetties exceeding 100 square metres in size;
(ix) slipways exceeding 100 square metres in size;
(x) buildings exceeding 100 square metres in size;
(xi) boardwalks exceeding 100 square metres in size; or
(xii) **infrastructure or structures with a physical footprint of 100 square metres or more;**

where such development occurs;

(a) within a watercourse;
(b) in front of a development setback; or
(c) if no development setback exists, within 32 metres of a watercourse, measured from the edge of a watercourse;

19: The **infilling** or **depositing** of any material of more than **5 cubic metres into, or the dredging, excavation, removal or moving of soil, sand, shells, shell grit, pebbles or rock of more than 5 cubic metres from**;

(i) a watercourse;
(ii) the seashore; or
(iii) the littoral active zone, an estuary or a distance of 100 metres inland of the high-water mark of the sea or an estuary, whichever distance is the greater

but excluding where such infilling, depositing , dredging, excavation, removal or moving;

(a) will occur behind a development setback;
(b) is for maintenance purposes undertaken in accordance with a maintenance management plan; or
(c) falls within the ambit of activity 21 in this Notice, in which case that activity applies.

27: The **clearance of an area** of 1 hectares or more, but less than 20 hectares of **indigenous vegetation**, except where such clearance of indigenous vegetation is required for;
(i) the undertaking of a linear activity; or
(ii) maintenance purposes undertaken in accordance with a maintenance management plan.

Site Description

The site is almost completely degraded, with very little indigenous vegetation left on the site. Parts of the site has been completely transformed through the construction of the hall building, parking lot and old sports surface (old netball/tennis court)

A small ephemeral stream or stormwater drain crosses the site the northern part of the site to the south-east. This stream is currently dry, and only appears to briefly flow during heavy rain or storm events. The stream will be incorporated into the stormwater system of the proposed development.

Need and Desirability

The generation of renewable energy ("*green energy"*) has become one of the most important aspects in developing countries, with the objective of sustainable development in sight. For this purpose the extensive and arid landscapes of the Northern Cape have become very popular, in terms of this immerging sector in the South African economy, namely solar energy generation. The speedy development of the above-mentioned sector has an amount of implications in terms of development in the area of Kakamas.

One of these implications is the influx of people, due to the steep increase in employment opportunities in the area. The above-mentioned again causes a direct increase in the need for goods, services and especially housing in the Kakamas area.

The location of the proposed development will not only give opportunity for infill planning but also positively contribute to the aesthetics of the area and the existing residential character thereof.

The proposed development will contribute positively to the land value of the involved property, as well as that of surrounding properties.

The proposed development will, after approval, take place on land that is currently utilised in an institutional capacity. The status quo situation isn't very aesthetically pleasing. The proposed utilisation of the involved property will entail a very high quality permanent residential development that will greatly contribute to value of character in the central neighbourhoods of Kakamas.

The proposed development will also create temporary job opportunities during the construction phase, and possibly permanent job opportunities during the operational phase.

Conclusion

The overall environmental impact is expected to be low (negative).

Considering all the information, it is not envisaged that this proposed development will have a significant negative impact on the environment, and the environmental and socio-economic benefits are expected to outweigh any negative impacts.

It is therefore recommended that this application be authorised with the necessary conditions of approval as described throughout this BAR.