

OUTENIQUA SENSITIVE COASTAL AREA EXTENSION REGULATIONS: Environmental Impact Report for minor activities

Project overview

1. Project title

Type of activity – construction of a new dwelling, excavation

Construction of new primary dwelling of Erf 729 The Woods, Brenton on Lake.

2. Proponent details

Include name of individual, organisation, phone fax, email, address, etc.

Mrs Suzanne van Zyl (landowner)

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3. Proposed location

Identify the location for proposed activities, including suitable maps, plans, diagrams and photos.

Erf 729 The Wood, Brenton on Lake, Knysna

Refer to Appendix A & B of the accompanying OSCAE Application Form/Report for location and site development plans.

4. Description of the activity or use

Describe all aspects of the proposal, including:

- *stages (set-up, operation and pack-up)*
- *any permanent or temporary construction*
- *size/footprint of area required*
- *ancillary works (such as any works required for access)*

Total area to be altered by activity:

- *Temporary (during construction phase) = ± 470.5m²*
- *Permanent (all hard surfaces not landscaped / rehabilitated) = ±340m² of which ± 226.5m² is under roof (coverage area = 30% of Erf).*

Clearance of Vegetation (Kukuyi grass) on Erf 729 (Pre-Construction): 470.5m²

House footprint (±226.5m² under roof) + outside hard surfaces (driveway, yards, walkways = ±113.5m²) + trenching for services (±48m²) + disturbance envelope / construction work area around footprint (1m wide), site camp etc. (±82.5m²) = ± 470.5m².

Pre-construction site preparation:

- Building-contractor site camp & office (approx. 132m²) (for storage of topsoil, aggregate, containers, equipment, site office, access, scaffolding etc.) will likely be established on the proposed driveway (72m²) and in the area between the driveway and watertank yard (±60m²) (against wall on boundary with Erf 728).

- Topsoil and vegetation will be stripped and stockpiled within site camp area.
- Demarcation / hoarding of disturbance envelope (1m around house & hard surface footprint + Site Camp area) with shade-cloth fence.

Construction:

- Construction of house, hard surfaces & associated installation of water & sewer pipelines to and from the house etc.
- Total Earthworks during construction: 100mm to 800mm in depth from Natural Ground Level (NGL), amounting to approx. 123.5m³ volume of material to be excavated / moved:
 - *House foundations, walls & services = ±800mm depth below NGL; ±109m³ excavated volume;*
 - *Paved driveway & yards = ±100mm to 500mm depth below NGL; ±15m³ excavated volume.*
- Once construction of house is complete, building-contractor's site camp will be removed and the existing driveway will be paved.

Post-construction:

- Topsoil to be re-instated around house and driveway area for rehabilitation and landscaping purposes.
- Recommended that rehabilitation & landscaping make use of indigenous plant local to the area, and that alien plant species already present on the Erf (Brazilian Pepper & Port Jackson trees), be removed and replaced with indigenous plants.

5. Management of the activity

Identify arrangements for the activity or use, including: Monitoring of environmental performance during set-up, operation and pack-up.

It will be the responsibility of the appointed Contractor and landowner to ensure that the conditions and/or recommendations associated with the OSCAE Permit and Forestry Licence are adhered to.

Environmental impact issues

6. Existing environment

Describe the key natural and landscape features, including vegetation, landforms, geology, watercourses and drainage. Focus on the site of the proposal and the immediately surrounding area. If necessary, provide a simple site analysis plan.

Refer to Appendix A of OSCAE Application Form/Report for the biodiversity plans.

Erf 729 is a designated residential property with 'The Woods' residential estate, located in the middle of the 'Brenton-on-Lake' residential area on the western bank of the Knysna Estuary.

The entire Brenton on Lake residential area falls with the **Estuarine Functional Zone** of the Knysna Estuary, with the northern portion mapped as a National Freshwater Ecosystem Priority Area (NFEP) wetland (estuary). Given the fact that the majority of Brenton-on-Lake falls within the Estuarine Functional Zone of the Knysna Lagoon, it is suspected that the groundwater table level is relatively shallow.

The Brenton-on-Lake also falls within the **Knysna National Lake Area** and **Garden Route Biosphere Reserve**, with the Knysna National Park area falling over the estuary. The Skuilte Private Nature Reserve is located on the bank of the estuary, two properties removed from 'The Woods' estate, to the east.

According to the 2018 Veg.Map, the natural vegetation type mapped for the area is **Knysna Sand Fynbos**, which is classified as a **Critically Endangered** ecosystem type and **Threatened Ecosystem** in terms of the National Environmental Management: Biodiversity Act (NEM:BA).

Portions of the farm properties located to the north of 'The Woods' estate are mapped as aquatic Critical Biodiversity Areas (CBA) associated with the salt-marsh habitat of the nearby estuary. The farm properties to the south and west, between Brenton-on-Lake and Brenton-on-Sea, are mapped as terrestrial CBAs.

Erf 729, The Woods, does not fall with a CBA or Ecological Support Area.

Despite being located within a mapped Threatened Ecosystem, Erf 729 is highly transformed, being maintained as a Kikuyu grassland by regular mowing within 'The Woods' residential estate. Therefore, no Sand Fynbos, Thicket or Forest remains on the property.

The proposed house has been designed to avoid the small group of trees located on the north-western corner of the erf (street boundary adjacent to Erf 730). Unfortunately, two small Yellowwood trees are located in the middle of the erf and house footprint and will have to be removed. An application for a Forestry Licence will be submitted to the Department of Environment, Forestry & Fisheries (DEFF) once the building plans are approved.

Identify any known natural hazards, such as bushfire risk, slope, water bodies. Show these on the site analysis plan (if prepared).

Small group of trees adjacent to proposed driveway.
Potential shallow water table.

7. Potential environmental impacts

Describe any likely impacts on vegetation, plants and animals (including threatened species). This should address both direct impacts (such as removal of vegetation) and indirect impacts (such as noise and lighting affecting native animals).

Erf 729 is highly transformed due on-going mowing, invasion by alien and garden ornamental plants and use as a garden waste dumpsite.

However, considering the inherent sensitivity of the Estuarine Functional Zone of the Knysna Estuary within which Erf 729 occurs, the management of development activities within this designated residential erf is paramount i.e. risk adverse approach and general duty of care principles are applicable.

Potential impacts associated with the construction of the house include:

Pollution:

Considering the sandy soils and associated risk of soil contamination (high infiltration potential), **concrete batching** must be restricted to future hard surfaces (paved areas & house footprint). Cleaning of cement, plastering & paint equipment must be done into a designated, banded & **lined slurry sump** within the site camp, to avoid contamination of surrounding environment. This sump must be cleaned out regularly and all waste material removed from site.

All **fuel-driven equipment** i.e. generators, concrete floaters etc. must be placed within a drip-tray when being re-fuelled or not in use. All **oil and fuel spills** must be cleaned up immediately (use of sand &/or sawdust) and contaminated soil removed from site by a registered hazardous waste service provider (Spill Tech, Interwaste, EnviroServ etc.) for proper disposal at a hazardous waste facility. Any vehicle noted to be leaking oil, must be removed to site for immediate repair.

Disturbance to remnant vegetation on erf & on neighbouring property (Erf 730):

Trampling within and around the small tree clump on the north-western / street corner – the Construction site (footprints + 1m disturbance envelope) should be demarcated with shade-cloth fence and all areas beyond this area should be considered to be NO-GO areas (except when installation of service infrastructure (water, sewer, electrics).

It is recommended that **locally occurring indigenous plant species** be used for post construction landscaping & rehabilitation efforts.

In addition, it is recommended that all alien invasive plant species be removed from site.

Describe any likely impacts on soils, watercourses and drainage such as erosion and stormwater runoff.

See above.

Describe any noise, water, air, dust, lighting, odour or vibration impacts from the activity. This should include consideration of impacts on neighbours and other users.

Noise:

Due to the proximity of the existing residential erven, it is recommended that noise generation during construction of the house be kept to a minimum and that construction activities be confined to **normal working hours** (08:00 - 17:00 on workdays).

Working hours are therefore restricted to:

- 08:00 – 17:00, Monday – Friday;
- No work on Saturday or Sunday;
- No work on Public holidays.

Should the Contractor or Maintenance Staff require additional working hours, these hours must first be approved in with the landowner and neighbours.

Apart from confining noise to the normal hours as detailed above, the following noise abatement (reduction of intensity and amount) measures should be implemented:

- Construction vehicles **adhering to existing access route** and minimum speed limits;
- **Strict operation times and periods** for construction works;
- Adherence to the National Building Regulations and Section 25 of ECA to minimise noise impacts;
- Provide **baffle and noise screens** to noisy machines as necessary;
- Provide **absorptive linings to the interior of engine compartments**;
- Ensure **machinery is properly maintained** (fasten loose panels, replace defective silencers);
- Switch off machinery immediately when not in use; and
- Reduce impact noise by careful handling of equipment and machinery

Dust Impacts:

Every effort to **minimize dust pollution** on the site must be undertaken especially considering the residential erven in close proximity. Construction vehicles must adhere to **speed limits** and make use of the existing gravel access driveway. **Exposed stockpile** materials (e.g. topsoil or building sand) must be adequately **protected** against wind (covered), and should be sited taking into consideration the prevailing wind conditions.

Lighting Impacts:

Regarding the temporary lighting during construction, the following refers:

- Lighting on site is to be sufficient for **safety** and **security** purposes only, but shall **not** be **intrusive** to on-site or neighbouring residents, disturb wildlife, or interfere with road traffic;
- Should overtime/night work be **authorised** by the landowners and neighbours, the contractor shall be responsible to ensure that lighting does not cause undue disturbance to on-site or neighbouring residents; and
- Only **low flux** and **low frequency** lighting shall be utilised.

Any outdoor security lighting associated with new house, the driveway or parking area should be downward facing, and controlled by motion sensors and day/night switches or timers to ensure that all lights will be switched off during the day.

Describe proposed environmental mitigation measures addressing the above or other relevant environmental features.

See above recommendation associated with impacts.

8. Supporting documentation

Provide any relevant plans or other supporting information.

See appendices attached to OSCAE Application / Report.

9 Proponent sign-off

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| <i>Signature</i> |  |
| <i>Name</i> | Suzanne van Zyl |
| <i>Position</i> | Land-owner |
| <i>Date</i> | 23 02 2021 |