

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

## Project overview

### 1. Project title

*Type of activity – Surfacing of existing access driveway across portion of Erf 215 (Main Road reserve) and Erf 210 (Municipal Open Space) to residential Erf 222, Buffalo Bay.*

Disturbance remnant vegetation and earthworks related to road box-cuts and sub-surface driveway ramp (with slope embankments) to sub-surface garage at Erf 222 boundary.

### 2. Proponent details

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

**Mrs Magdalena Roos (landowner)**

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### 3. Proposed location

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

**Portion of Erf 215 (Main Road reserve) and Erf 210 Buffalo Bay, 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:**

<b>SOIL VOLUME TO BE REMOVED</b>	
BOX CUT FOR ROAD	145m <sup>3</sup>
SLOPE DOWN SIDE	82m <sup>3</sup>
SLOPE UP SIDE	133m <sup>3</sup>
LAYERWORKS	21m <sup>3</sup>
TOTAL SOIL TO BE REMOVED	381m <sup>3</sup>

Area of road 147m<sup>2</sup>

Area of existing road 123m<sup>2</sup>

Area of slopes next to entrance road 117m<sup>2</sup>

**Temporary** (during construction phase) = ± **85.5m<sup>2</sup>** temporary work space adjacent to driveway alignment (±25.5m<sup>2</sup>) plus ±60m<sup>2</sup> laydown area & construction site camp on disturbed area

adjacent to Erf 222 – to be rehabilitated with indigenous vegetation.

**Permanent** = ± 147m<sup>2</sup> paved driveway + ± 117m<sup>2</sup> rehabilitated excavation slopes on either side of driveway ramp = 264m<sup>2</sup>.

Disturbance of vegetation:

(72 + 14)+(20 + 12) = ± 118 m<sup>2</sup> on Erf 210 & Main Road reserve:

- Strips of disturbed area, remnant grass & Thicket vegetation to be cleared for widening & excavation of existing access road to sub-surface Vehicular Ramp / basement garage on Erf 222 = ± 117m<sup>2</sup>.
- Temporary Site Camp area on Erf 210 directly adjacent & east of Erf 222 for storage of topsoil, building material & waste, aggregate / containers / site office etc. = ±60m<sup>2</sup> of highly disturbed / trampled vegetation.

Pre-construction site preparation:

- Building-contractor site camp & office (approx. 60m<sup>2</sup>) (for storage of topsoil, aggregate, containers, equipment, site office, access, scaffolding etc.) will be established on along existing access to Erf 222, around house footprint and on disturbed area of under the 'Encroachment Agreement' on adjacent Erf 210.
- Topsoil and vegetation will be stripped and stockpiled within site camp area.
- Property and associated 'Encroachment Area' on Erf 210 to be fenced / hoarded for security purposes during construction.

Construction:

- Construction of driveway & sub-surface ramp.
- Total Earthworks during construction: 0m to 3m in depth from Natural Ground Level (NGL), amounting to approx. 381m<sup>3</sup> volume of material to be excavated / moved:
- Once construction of driveway and house is complete, building-contractor's site camp will be removed and the existing driveway and parking area will be paved.

Post-construction:

- Topsoil to be re-instated around house and driveway area for rehabilitation and landscaping purposes.
- Rehabilitation & landscaping only with indigenous plant local to the area.

## 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 Contractor and landowner to ensure that the recommendations associated with the Adhoc Development Setback Line approvals and OSCAE Permits for both Erf 222 and Erf 210 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 to biodiversity plans.

Erf 222, Buffalo Bay is located on a convex portion of rocky coastline, on the western side of a headland which protrudes south-east into the sea. Approx. 70m to the north-west a



concave beach extends west. The seashore is predominantly rocky, with rock pebbles, directly in front and to the south and east of Erf 222 & 210, Buffalo Bay (refer to Figures below). A section of sandy beach starts approx. 70m away to the north-west.



02 Feb 2021 12:43:50  
34°5'14,972"S 22°58'18,595"E



02 Feb 2021 12:47:02  
34°5'14,76"S 22°58'19,298"E

View north-west across 2m coastal building line / setback line. House on Erf 224 noted in background.



02 Feb 2021 12:26:14  
34°5'14,545"S 22°58'17,930"E



02 Feb 2021 12:28:13  
34°5'14,878"S 22°58'18,271"E

View south-east across 2m coastal building line / setback line. Area to be demarcated as no-go.



02 Feb 2021 12:27:35  
34°5'14,648"S 22°58'18,078"E



02 Feb 2021 12:26:47  
34°5'14,308"S 22°58'17,617"E

View north-east across Erf 222 from setback line.

View up boundary between Erf 224 & Erf 222.





Aerial image indicating Erf 222 (red polygon) & neighbouring property cadastral boundaries (courtesy Google Earth Pro, 2021). Yellow polygon indicates approx. portion of Erf 210 under Encroachment Agreement.



Buffalo Bay headland and coastline (Google Earth Pro 2021). Erf 222 indicated as red polygon.

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

The closest point of the existing road / driveway on Erf 210 to the known storm surge high-water mark of the sea is approximately 33m away. The proposed dwelling on Erf 222 is to be built behind the 2m building line / development setback line from the property boundary, some **±10m away from the approx. storm surge high-water mark (edge of vegetation)**. The western (seaside) property boundary is approx. 5m above mean sea level (MSL).

The property falls within the medium erosion-risk zone of the littoral active zone of the sea (50-year), as well as the Coastal Management Line, as specified by the Integrated Coastal Management Amendment Act & the Coastal Management Setback Line for the Eden District. Development within this highly dynamic and sensitive area, must thus be controlled and well managed in terms of the Adhoc Development Setback Line Approval issued by DEA&DP, to ensure minimal damage to the coastal environment. To this end the Municipality should ensure that appropriate **stormwater and erosion control measures** are included in the design of the house & all hard surfaces.

Considering the inherent sensitivity and dynamics of the coastal zone in which Erf 222 & 210 occur, the management of development activities within and surrounding these erven is paramount i.e. risk adverse approach and general Duty of Care principles are applicable.

It is further recommended that a **low earth berm** be created on the top edge of the seaside excavated driveway slope, to limit ingress of future sea surges. This berm should be planted with locally occurring indigenous plants as part of the Applicant's vegetation re-instatement / rehabilitation plans for this area, and the driveway slopes. The proposed permanent setback line is aligned approx. 3m seaward of the excavated driveway slope to allow for future maintenance of this vegetated earth berm.

A suitably experienced & qualified **ECO must be appointed** prior to the commencement of activities on-site to oversee the construction process and implementation of the necessary environmental risk mitigation measures.

## **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 222 is highly transformed due to previous & current landuse – Municipal storage & maintenance depot; followed by demolition of buildings and fenceline in early 2016; used as a stockpile site for excavated material from the neighbouring construction site (on Erf 224) end 2016; and being traversed by the public to access the coast – therefore, very little Dune Fynbos remains on the property. Remnant indigenous vegetation occurs on the municipal Erf 210 to the south and east of the property *albeit* disturbed by vehicle and pedestrian trampling to gain access coastline and braai area to the east.

It is the intention of the Applicant to make use of the transformed portion of the municipal Erf 210 directly adjacent to and east of Erf 222 (existing Encroachment Agreement area) as a temporary construction site camp & stockpile area. When the construction of the house and the driveway is completed the landowner of Erf 222 intends to re-instate this area with locally occurring indigenous plants, as prescribed by the Encroachment Agreement with the Municipality for continued access across this portion of land (see Appendix C for Plan of area considered under the Encroachment Agreement between landowner of Erf 222 and the Municipality). There is a small 'island of vegetation', as well as a designated public vehicle access and parking to the braai area on Erf 210 further to south-east, which will not be affected by the proposed activities on Erf 222 or access driveway on Erf 210 or in terms of the Encroachment Agreement.

Considering the inherent sensitivity and dynamics of the coastal zone in which Erf 222 occurs, the management of development activities within and surrounding this designated

residential erf is paramount i.e. risk adverse approach and general duty of care principles applicable.

A suitably experienced & qualified **Environmental Control Officer (ECO) must be appointed** prior to the commencement of activities on-site to oversee site demarcation, plant rescue, site clearance, construction process and rehabilitation efforts, in-so-far-as the implementation of the necessary environmental risk mitigation measures – see impact-related recommendations below.

Potential impacts associated with the construction of the house include:

#### Erosion:

Movement of silt laden and/or **polluted stormwater**, from the construction site into the adjacent coastal environment. The establishment of **silt fences** as part of the site hoarding, as well as the implementation of **anti-erosion and pollution avoidance measures** during construction, will adequately avoid and mitigate these potential impacts. The Municipality should ensure that appropriate **stormwater and erosion control measures** are included in the design of the house & all hard surfaces. Both **temporary and permanent stormwater and erosion control measures** must be installed to manage run-off from site and stockpile areas during construction, in order to prevent erosion. **Topsoil stockpile/s** should be less than 1.5m in height to avoid erosion risks.

#### Pollution:

**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, bunded & **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.

**Waste** that has been dumped on & near the site must be removed by the Contractor prior to construction, to ensure that the topsoil to be stripped from the site & stockpiled for rehabilitation use, is not contaminated.

**Construction-related waste**, as well as during occupation of the dwelling, should be managed via an integrated approach i.e. waste avoidance, reduction, re-use, recycling, recovery, treatment, and lastly safe disposal. Waste that cannot be re-used, must be disposed of a registered Municipal landfill.

#### Disturbance to remnant vegetation & coastal environment:

**Remaining vegetation** within the coastal setback area, as well as adjacent to the access (incl. protected & indigenous thicket species) must be suitably demarcated prior to construction to ensure protection

**Trampling** of the adjacent coastal vegetation seaward of the hoarded construction site (to be erected along the 2m building line / setback line) by construction workers – this potential impact must be avoided by the **demarcation of this area as NO-GO**.

Plant species found within the development footprint (e.g. *Falcia*, *Gazania sp.* etc.) should be rescued and used as part of the **post-construction rehabilitation** of disturbed areas.

It is recommended that the portion of Erf 210 approved under the Encroachment Agreement with the Knysna Municipality (see Plan indication area ABCD in Appendix C attached), as well as the reserve of Main Road, must be **rehabilitated with locally occurring indigenous vegetation**. Species recommended include:

*Gazania sp.; Myrica cordifolia; Metalasia muricata; Falkia sp.; Cape Saffron (Cassine peragua); Bitou (Chrysanthemoides monilifera); Arctotis sp.; Seepampoen (Arctotheca popilifolia); Aloe arborescens; Milkwood (Sideroxylon inerme), Baboon Grape (Rhoicissus digitata), Cape Coastal Cabbage Tree (Cussonia thyrsiflora); Carpobrotus sp., succulent groundcovers etc.*

*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.

#### Inconvenience & Nuisance to Neighbours:

Under no circumstances may construction-related or delivery vehicles be allowed to parking in or adjacent to the driveways of neighbouring landowners.

#### 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 and the driveway 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 recommendations 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

<i>Signature</i>	
<i>Name</i>	Magdalena Roos
<i>Position</i>	Landowner
<i>Date</i>	