

Best Practice Guideline: sensitive development & activities

preamble

Development in natural areas must maintain the integrity of the local environment and must not compromise the ecosystem components and functioning within the landscape.

All associated facilities and services will impact on the surrounding natural environment; it is your duty as custodian to ensure that these impacts are minimised through mitigation.

planning

It is imperative to follow the correct protocols when considering development in a natural area. To this effect familiarise yourself with the necessary national legislation and provincial guidelines. If in doubt contact Department of Environmental Affairs and Development Planning (DEA & DP) and they will inform you of the correct procedures. Most developments trigger listed activities in the National Environmental Management Act (NEMA) and might require an Environmental Impact Assessment (EIA) for which you will need to consult an Environmental Assessment Practitioner. For more advice or guidance on this, refer to the website www.capegateway.gov.za or consult CapeNature or your local municipality.

A properly planned exercise is less costly than a rushed affair – consider legal and environmental aspects first, then the quantitative costings. Upon approval and before any construction takes place, an **Environmental Management Plan** must be compiled and initial site design must be approved. This prevents haphazard development and minimises unnecessary impact on the environment.

site selection

The placement of development is important for maintaining ecological integrity and the sense of place. The principal governing development in natural areas should be that wherever possible existing “footprints” and infrastructure should be utilised, so consider developing transformed land first.

Visual impact impinges on the sense of place. Structures should not be sited within sight of each other and most certainly not be constructed so as to be a blot on the landscape. You might want to advertise your presence but it is a visual impact that mars the landscape and destroys the natural beauty.

Substrate and terrain type must be taken into account. The substrate of the area to be developed must be assessed to see if it is adequate for the intended use, and measures must be investigated to prevent and minimise erosion. The aspect of the area must also be assessed with respect to access roads as well as the orientation the buildings are to be built in to maximise the use of natural light, temperatures, weather protection and if necessary, possibly having a view. It is also important to consider water availability when planning accommodation sites, hiking trails, picnic areas and event infrastructure.

In order to make an informed decision it is prudent to enlist the assistance of specialists. It may well be a necessity if so determined by DEA & DP.

footprint

The development footprint must be carefully thought out. *Scattered development* would have a much bigger footprint but still retain a “wilderness feel” while *congregated development* will have a smaller footprint but could be less aesthetically pleasing and create a more visible development scar. The local environmental integrity must be maintained and through careful planning this can be achieved in scattered development. Although congregated development requires less service lines and roads. *Finger development* should be discouraged, as this fragments vegetation, which cannot burn due to their proximity to development - see *BPG: Fire Management & Prevention*, as well as inhibiting animal transit through the area, but more importantly increases edge effect on the ecosystem overall.

signage & awareness

Signage should be standardised and adequate but not over used. Signs required may include directional, warning or informational and could be either permanent or temporary (e.g. warning of nesting birds, flooding or providing seasonal information, etc). Information can also be distributed in the form of brochures/leaflets available at entrance/information points.

gardens & landscaping

In order to maintain the sense of place the natural vegetation surrounding structures should be left intact. The ugly trend of demarcating a developed area with an unnatural often tastelessly “designed” garden should be avoided. If for the sake of creating a firebreak a garden is considered necessary then it should consist of locally indigenous species sourced on site.

Unnatural gardens are high maintenance and are a source of invasive flora (both indigenous and exotic). If the area was previously denuded of natural vegetation then locally indigenous plants sourced on site should be used to create a garden that can showcase the local flora.

hard landscaping

Hard (non permeable) landscaping surfaces, i.e. brick paving, tiling, driveways, etc, should be minimised and avoided where possible. Soft landscaping with plants should be encouraged. Hard landscaping increases water runoff and creates harsher (more extreme) localised temperatures. It also hardens the underlying soil, making it difficult for subterranean animals to burrow.

buildings

Where possible, buildings should be ‘green’, using efficient sustainable energy methods and materials. All development should be as energy efficient as possible.

Natural assets such as aspect and slope should be considered to minimise the need for additional lighting and heating. Alternative power sources such as solar power or the use of gas should be investigated. Light pollution at night should be minimised. Lights outside should be used sparingly as it affects bird nesting and nocturnal fauna as well as creating death traps for nocturnal insects.

roads

Roads may need to be built or existing ones improved. A road network or plan must be carefully worked out. For this, the type of road needed must be investigated and it must be decided whether the road will merely be a brush cleared track or whether it should be tarred or gravelled (i.e. material brought in which could leach into the soil, increase runoff, etc).

Road specifications must be considered and must be suitable for low or high load vehicles, as necessary. If a hand cleared track is adequate, then it is senseless bulldozing a road surface. Roads must be well sited and this can be done by using the landscape as a guide with road routing taking advantage of the topography and not working against it. By doing this, usual road problems are reduced, such as minimising the occurrence of erosion, addressing drainage, aesthetics, incline, etc.

Roads can have severe impacts on small animals, by creating barriers for them - roads disrupt dispersal routes and fragment habitats. Subterranean and burrowing animals like blind snakes and moles cannot burrow beneath compacted road surfaces and concrete structures. Low water bridges and drifts interrupt the movement of fish and other aquatic species, and so limit their breeding success.

In calculating the cost of a road, one needs to take into account the road construction, the ongoing maintenance as well as the environmental costs such as rehabilitation after construction, and if erosion control will be required.

fencing

An assessment must be made to ascertain whether fencing is really necessary. While fencing can control illegal access, they also impede the natural movement of fauna. They might be separating seasonal feeding or nesting grounds, seasonal migratory routes, breeding grounds or even splitting natural territories or animal family groups.

The nature of the environment and of the activities to take place on the land must determine the type of fencing (if any) to be used, and then it needs to be the least impacting on the above elements. Types of fencing that could be considered include the use of natural hedges where screening is needed, boundary markers, chicken mesh fencing, game fencing or electric fencing. CapeNature can be consulted as to the game fencing required for adequate enclosure of different game species on the property. Diamond mesh fencing should be avoided as it can be dangerous for medium sized animals such as porcupines and duikers, which often get their heads stuck in an attempt to get through the fence.

Raising the bottom strand in a wire fence or creating small openings along the bottom of fencing or walls will allow small animals such as tortoises, frogs and rodents to cross these barriers.

trails & paths

Pathways should be developed to and from buildings to prevent the creation of unnecessary informal paths leading to excess path braiding. Paths could be natural pathways or boardwalks. Pathways near sensitive areas such as dunes or wetlands should be done in such a way as to minimise the impact on the area, such as the use of boardwalks or stepping stones. Trails and pathways must be properly demarcated to ensure that users keep to the formal footpaths and do not increase the number of 'illegal' paths. Marking of hiking trails should be clear, but not so visible so as to spoil the natural beauty of the area. This could be done with rocks and the occasional painted footprint on the rocks. They also need to be sited in a way that would minimise erosion and would take the path user past points of interest and viewpoints. These paths and trails should vary in difficulty to encourage a wider range of users. You could develop a combination of demanding hikes, comfortable rambles, or child and disabled-person friendly paths. These options should be clearly sign posted.

Do not allow too many trails, which will encroach on the "wilderness" feel of the area. Paths condition must be monitored and general maintenance on them should be carried out when necessary. This could include closing paths for rehabilitation when needed.

picnic sites & parking areas

Picnic sites and parking areas should be provided in acceptable and demarcated areas. These sites need to ensure that further damage to the vegetation and/or beaches is prevented. Access should be via defined tracks.

A decision should be taken whether the area should be 'bin free' (and must then be advertised as such) or if rubbish bins will be placed at certain sites, especially picnic areas. If rubbish bins are going to be installed, they will need to be emptied on a regular basis to prevent the local fauna from going through them and they need to be baboon-proof.

waste management

Systems should be in place for sustainable utilisation and re-utilisation, specifically recycling of used products (e.g. metal, glass, paper) and the recycling of water. Chipping and composting of unwanted biomass should be encouraged.