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AIMS OF THE ENVIRONMENTAL MANAGEMENT PLAN (EMP)

The aims of this EMP are to:

- Guide and control construction activities relating to the 101 Acutts Drive Residential Estate to minimise negative environmental impacts during construction.
- Guide and control operational and management activities to minimise negative environmental impacts and risks.
- Provide a working Management Plan for enhancement and management of the ecological functioning of the property.

The EMP is also an action plan for implementation of management-related recommendations and mitigation measures identified in the Environmental Scoping Report for the development, and should be updated when necessary.

This EMP forms an extension of the Environmental Authorisation granted for the development on 7 March 2007. All controls contained herein are thus legally binding.

IMPLEMENTATION OF EMP

A number of potential environmental impacts, mitigatory measures and environmental management controls are laid out in this document. In order to ensure compliance with this EMP during construction and operation, an Environmental Control Officer (ECO) must be appointed to monitor the implementation of the recommendations made herein.

During the construction phase, an Independent Environmental Control Officer (ECO) must be appointed to guide implementation of the EMP. The ECO must undertake monthly audits in respect of compliance with the EMP that must be submitted to the KZN Department of Agriculture and Environmental Affairs Compliance Unit, and the eThekweni Municipality Environmental Management Department.

During the operational phase, an appropriate member of the permanent staff must be designated as the Environmental Officer. The responsibility will rest with this individual to ensure compliance with the EMP on the estate at all times.

NON-COMPLIANCE WITH THE EMP

Any non-compliance with the EMP will be treated as serious. Liability rests with the developer for non-compliance with the EMP. A penalties schedule is attached as Appendix A that will be implemented in the instance of non-compliance by any contractor working on site, such that the developer has a means to ensuring that their risk in respect of non-compliance by these contractors can be managed.

SECTION A: PRE - CONSTRUCTION PHASE

GENERAL PRINCIPLE FOR THE PRE-CONSTRUCTION PHASE

The pre-construction phase must involve careful planning of the construction phase for minimised environmental, social and economic impacts – both on site and for surrounding neighbours and residents.

A1 SET UP OF CONSTRUCTION CAMP & CONSTRUCTION SITE

- A1.1 Choice of site for the Contractor's camp requires the ECO's permission and must take into account location of local residents and ecologically sensitive areas, including flood zones, oversteep/unstable zones and areas of natural vegetation. A site plan must be submitted to the ECO for approval prior to establishment of the camp.
Start-up
- A1.2 Cut and fill must be avoided where possible for the construction of the Contractor's camp.
Start-up
- A1.3 The size of the construction camp must be minimised.
Start-up
- A1.4 Adequate parking must be provided for site staff and visitors.
Start-up, weekly
- A1.5 The Contractor must attend to drainage of the construction camp to avoid standing water or sheet erosion.
Start-up, weekly
- A1.6 Bins and / or skips must be provided within the construction camp at convenient intervals.
Start-up, weekly
- A1.7 A bulk waste collection area must be established / demarcated within the Construction Camp.
Start-up
- A1.8 A materials storage area must be identified and designated within the Construction Camp.
Start-up
- A1.9 An area for fuel storage must be identified, this area should be sited to have minimal impact on and risk to surrounding residents, and should be secured within the Construction Camp. The installation of fuel storage tanks must include the erection of a bunded catchpit that can contain 110% of the fuel volume stored. This bund must have a controlled stormwater outlet with a filter.
Start-up
- A1.10 Hazardous chemical working / refuelling areas must be bunded with an impermeable liner to protect groundwater quality. This can be done using a plastic liner covered with soil.
Start-up
- A1.11 Storage areas containing hazardous substances / materials must be clearly signed and must have fire extinguishers in close proximity.
Start-up
- A1.12 Residents living adjacent to the construction site and nearby the hazardous materials storage area must be notified of the existence of the hazardous storage area use of these materials on site.
- A1.13 Material Safety Data Sheets (MSDSs) shall be readily available on site for all chemicals and hazardous substances to be used on site. Where possible and available, MSDSs should additionally include information on ecological impacts and measures to minimise negative environmental impacts during accidental releases or escapes.
Start-up
- A1.14 Chemical toilets must be installed at the Construction Camp. At least 1 toilet must be available per 20 workers that will use the camp on a daily basis.
Start-up

A1.15 Parking areas for plant, oil / bitumen stores, or other chemical storage zones must be prepared with a plastic liner under the soil.

Start-up

A1.16 Signs should be erected on all entrance gates indicating that no temporary jobs are available, thereby limiting opportunistic labourers and crime. Signage must also include a list of contact numbers for emergency purposes.

Start-up

A1.17 A planning meeting and site walk must be conducted by the developer, ECO, necessary specialists and contractors to identify actual route alignments and placement of all buildings and infrastructure prior to works on site commencing, and to discuss the phasing of various construction activities on site.

Start-up

A1.18 The ECO and Land Surveyor must designate and demarcate No Go zones on a plan for the whole property prior to construction starting. This plan must be given to all Contractors. No Go zones include:

- Wetland areas and their 20m buffer zones
- Conservation servitude areas
- Oversteep areas

Start-up

A1.19 The ECO and Land Surveyor must physically demarcate No Go zones using temporary fencing, hazard tape and / or other semi-permanent and obvious methods.

Start-up

A2 ACCESS ROADS FOR SURVEY & CONSTRUCTION

A2.1 The Contractor must take into account the following limitations when deciding on access routes into and around the construction site for survey and construction purposes:

- Roads must not result in damage to any drainage lines, rivers or wetlands;
- Roads must run on slope contours and not straight up and down the slopes;
- Roads must not be within the 1:100 year floodline;
- Roads may not traverse sensitive environmental zones such as the forests, wetlands or riverine fringes, or sensitive grassland areas;
- Access roads must follow the alignment of permanent roads where possible.
- The need to minimise disturbance to adjacent businesses and residents.
- Safety of accesses onto main roads.

Start-up

A2.2 All roads for construction access must be planned and approved by the ECO ahead of construction activities. They should not be created on an ad-hoc basis.

Start-up

A2.3 Access roads must follow the alignment of final / permanent roads wherever possible.

Start-up

A2.4 Roads or trails that are cut to provide temporary access for survey work must be minimised.

Start-up, weekly

- A2.5 Marking of survey points must be done with the ECO's approval.
Start-up, weekly
- A2.6 Clearing of indigenous vegetation must be kept to a minimum during survey operations.
Start-up, weekly
- A2.7 Road widths and the radii of curves are to be reduced to the minimum required.
Start-up
- A2.8 Roads must follow natural contours to minimise stormwater erosion risk.
Start-up
- A2.9 Construction roads must use as little cut and fill as possible and minimise exposed soil surface area.
Start-up
- A2.10 All stream/ river crossings and temporary bridges shall be built to the ECO's approval. These must allow for the flow of water where required.
Start-up
- A2.11 Contractors shall construct formal drainage on all temporary haulage roads in the form of side drains and mitre drains to prevent erosion and point source discharge of run-off. Controls to reduce run-off velocity must be placed on all roads (compacted berms / humps).
Start-up
- A2.12 Scour check walls must be constructed in the side drains as follows:
- | Gradient of Road | Scour Check Spacing |
|-------------------------|----------------------------|
| <4% | Not required |
| 5% | 20m |
| 8% | 10m |
| 10% | 5m |
- Start-up*
- A2.13 Scour checks can be constructed from rocks available on site or using driven wooden pegs. Smaller rocks must be placed on the invert of side drain upstream and downstream of the scour checks.
Start-up, weekly
- A2.14 All vehicles accessing the property must adhere to road speed limits.
Start-up, weekly

A3 SOURCING OF NATURAL MATERIALS

- A3.1 Contractors shall prepare a source statement indicating the sources of all materials (including topsoil, sands, natural gravels, crushed stone, asphalt, clay liners etc), and submit these to the ECO for approval prior to commencement of any work.
Start-up
- A3.2 Where possible, a signed document from the supplier of natural materials should be obtained confirming that they have been obtained in a sustainable manner and in compliance with relevant legislation.
Start-up
- A3.2 Where materials are borrowed (mined), proof must be provided of authorisation to utilise these materials from the landowner / mineral rights owner and the Department of Minerals and Energy.
Start-up

SECTION B: CONSTRUCTION PHASE

GENERAL PRINCIPLES FOR THE CONSTRUCTION PHASE

1. All construction activities undertaken on site must aim to limit disturbance, nuisance and interruptions to the lives and daily business of neighbours, local residents and local businesses.
2. Construction and development staff should be courteous and respectful of the people potentially affected by construction activities, and be willing to address any activities that are causing undue nuisance or inconvenience to any party.
3. The construction phase must be completed in as short a time as possible.
4. All construction activities must be undertaken with the safety of people and the environment as a first priority.
5. Good housekeeping and a Clean Site Policy should be adopted by all persons involved in construction activities.

B1 MANAGEMENT OF CONSTRUCTION CAMP

- B1.1 The size of the construction camp must be kept minimised. The camp or materials storage areas associated with the camp may not be extended without the prior approval of the ECO.
Monthly
- B1.2 Adequate parking must be provided for site staff and visitors.
Monthly
- B1.3 The Contractor must attend to drainage of the construction camp to avoid standing water or sheet erosion.
Monthly
- B1.4 A bulk waste collection area must be designated, and waste cleared regularly by a recognised waste contractor.
Monthly
- B1.5 Litter collection bins must be provided within the construction camp at convenient intervals and must be regularly cleared.
Monthly
- B1.6 Adequate numbers of chemical toilets must be maintained in the construction camp to service the staff using this area. At least 1 toilet must be available per 20 workers using the camp.
Monthly
- B1.7 The chemical toilets servicing the camp must be maintained in a good state, and any spills or overflows must be attended to immediately.
Weekly

B2 MANAGEMENT OF CONSTRUCTION SITE

- B2.1 Signs should be erected on all entrance gates indicating that no temporary jobs are available, thereby limiting opportunistic labourers and crime.
Monthly
- B2.2 Potentially hazardous areas such as trenches are to be cordoned off and clearly marked at all times.
Weekly

- B2.3 Lighting on site is not allowed except at the Construction Camp.
Monthly
- B2.4 No firearms allowed on site or in vehicles transporting staff to / from site, (unless used by security personnel).
Daily
- B2.5 All vehicles accessing the property must adhere to road speed limits.
Daily
- B2.6 Construction / management activities involving use of the service vehicle, machinery, hammering etc, must be limited to the hours between 7:00am and 5:30pm weekdays; 7:00am and 1:30pm on Saturdays; no noisy activities may take place on Sundays.
Daily
- B2.7 A list of emergency contact numbers must be clearly displayed at the Construction Camp at all times.
Monthly
- B2.8 Disturbance to birds, animals and reptiles and their habitats should be prevented at all times.
Weekly
- B2.9 The Site Engineer must maintain a complaints register, and any interested party must record their comments therein. This must be available for review during audits.
Monthly
- B2.10 The ECO, Developer and Manager of the site must be aware of the Interested and Affected party list developed during the Environmental Impact Study. This must be updated with the names of any people who sign the register.
Monthly
- B2.11 Activities that may disrupt neighbours (e.g. delivery trucks, excessively noisy activities etc) must be preceded by notice being given to the affected neighbours at least 24 hours in advance.
Monthly
- B2.12 Should any items of historical, cultural or archaeological value be uncovered, the facilitator that should be contacted is Elize Becker of AMAFA Heritage KZN, telephone no 033-3946543, fax 033-3426097.
Monthly
- B2.13 All areas that have been stripped of vegetation, including all roads, must be dampened periodically to avoid excessive dust.
Weekly
- B2.14 Where necessary, construction activities can be screened from view with the erection of a shadecloth barrier.
Monthly

B3 WORKER CONDUCT

- B3.1 Workers must be briefed by the person in charge of managing construction / management activities on the do's and don'ts on the property, when workers arrive at the property. This must be repeated in weekly toolbox talks.
Weekly
- B3.2 No alcohol, drugs, snares, slingshots or animals may be brought onto the property.
Daily

- B3.3 No fires may be made on the property unless under the guidance of the ECO for the purposes of controlled burning of grasslands / wetlands or within controlled braai areas in the Construction Camp.
Weekly
- B3.4 No hunting activities are allowed on site or the adjacent properties.
Daily
- B3.5 Workers that are under the influence of alcohol or drugs may not operate chainsaws, vehicles or other machinery.
Daily
- B3.6 Construction workers should be made aware that they are not to make excessive noise (e.g. shouting/hooting).
Weekly
- B3.7 The harvesting of firewood, medicinal plants, tree bark, flowers or other natural materials is forbidden on the site and adjacent properties.
Daily
- B3.8 Trespassing on neighbouring properties is forbidden. All workers must be shown the limits of the property and remain within these limits during the course of the working day.
Weekly
- B3.9 No workers may sleep on the property unless proper accommodations for this have been established.
Monthly
- B3.10 Workers must be instructed to be polite to neighbours, and be told to whom any interested members of the public may be directed to on site.
Monthly
- B3.11 Prior to the commencement of construction, all workers need to know what possible archaeological or historical objects of value may look like, and to notify the site manager if one is found.
Weekly

B4 ACCESS ROADS FOR CONSTRUCTION

- B4.1 All roads for construction access must be planned and approved by the ECO ahead of construction activities. They should not be created on an ad-hoc basis.
Monthly
- B4.2 Use of regional access routes must take into consideration the need to minimise disturbance to businesses and residents.
Monthly
- B4.3 No trees/shrubs/groundcover may be removed or vegetation stripped for the construction of access roads without the prior permission of the ECO.
Weekly
- B4.4 Access roads must follow the alignment of final/permanent roads wherever possible.
Monthly
- B4.5 Construction roads must use as little cut and fill as possible and minimise exposed soil surface area.
Monthly

- B4.6 Agreed turning areas for haulage vehicles are to be formalised and used by the Contractor. No turning manoeuvres other than at the designated places shall be permitted.
Monthly
- B4.7 Roads must follow natural contours to minimise stormwater erosion risk.
Monthly
- B4.8 All stream/river crossings and temporary bridges shall be built to the ECO's approval. Haulage roads must allow for the natural flow of water where required.
Monthly
- B4.9 Contractors shall construct formal drainage on all temporary haulage roads in the form of side drains and mitre drains to prevent erosion and point source discharge of run-off. Controls to reduce run-off velocity must be placed on all roads (compacted berms/humps).
Monthly
- B4.10 Scour checks can be constructed from rocks available on site or using driven wooden pegs. Smaller rocks must be placed on the invert of side drain upstream and downstream of the scour checks.
Monthly
- B4.11 Contractors should ensure that all access roads (including those off the property) are maintained in good condition by attending to potholes, corrugations and stormwater damage as soon as these develop.
Monthly
- B4.12 If necessary, staff must be employed to clean surfaced roads adjacent to construction site where materials have been spilt.
Monthly
- B4.13 Cognisance of vehicle weight/dimensions must be taken when using access constructed out of certain materials. e.g. paved surfaces/cobbled entranceways.
Monthly
- A4.14 Roads or trails that are cut to provide temporary access for survey work must be minimised.
Monthly
- A4.15 Marking of survey points must be done with the ECO's approval.
Monthly
- A4.16 Clearing of indigenous vegetation must be kept to a minimum during survey operations.
Monthly

B5 STORAGE OF GENERAL MATERIALS

- B5.1 General building/other materials include non-hazardous materials and chemicals. These must be kept in a designated area.
Weekly
- B5.2 The designated storage area must be kept fenced or secured to keep people and animals out. This area should be located in or near the Construction Camp enclosure.
Weekly

- B5.3 Materials must be stacked in a way that they cannot fall and cause injury or damage to property or the natural environment.
Weekly
- B5.4 Fire prevention facilities must be present at the storage area at all times.
Weekly
- B5.5 The storage area must be sited so that it has minimal visual impact on surrounding neighbours and people living within the development area. Special attention should be given to screening highly reflective materials.
Weekly
- B5.6 Contractors shall prepare a source statement indicating the sources of all materials (including topsoil, sands, natural gravels, crushed stone, asphalt, clay liners etc), and submit these to the ECO for approval prior to commencement of any work.
Monthly
- B5.7 Where possible, a signed document from the supplier of natural materials should be obtained confirming that they have been obtained in a sustainable manner and in compliance with relevant legislation.
Monthly
- B5.8 Where materials are borrowed (mined), proof must be provided of authorisation to utilise these materials from the landowner / mineral rights owner and the Department of Minerals and Energy.
Monthly
- B5.9 Obstruction to drivers' line of sight due to stockpiles and stacked materials must be avoided.
Monthly

B6 STORAGE & USE OF HAZARDOUS MATERIALS

Definition of hazardous substances / materials are those that are potentially: poisonous, flammable, carcinogenic or toxic. These may include: diesel, petroleum, oil, bituminous products, cement, solvent based paints, lubricants, explosives, drilling fluids, pesticides, herbicides, LPG. Every effort should be made to ensure that any chemicals or hazardous substances do not contaminate the soil or ground water on site.

- B6.1 Material Safety Data Sheets (MSDSs) shall be readily available on site for all chemicals and hazardous substances to be used on site. Where possible and available, MSDSs should additionally include information on ecological impacts and measures to minimise negative environmental impacts during accidental releases or escapes.
Monthly
- B6.2 Fuel storage areas must be bunded with a catchpit of at least 110% the storage capacity of the fuel storage container. This bund must have a controlled stormwater outlet with a filter.
Monthly
- B6.3 Hazardous chemical working/refuelling areas must be bunded with an impermeable liner to protect groundwater quality. This can be done using a plastic liner covered with soil.
Monthly
- B6.4 Storage areas containing hazardous substances/materials must be clearly signed.
Weekly

- B6.5 Staff dealing with these materials/substances must be aware of their potential impacts and follow the appropriate safety measures.
Weekly
- B6.6 Fire prevention facilities must be present at the storage area at all times.
Weekly
- B6.7 The area must be properly safeguarded from fire during burning of the grasslands on the property or adjacent properties.
Monthly
- B6.8 The hazardous materials storage area must be fully secured to prevent people and animals from accessing it.
Monthly
- B6.9 Transport of hazardous materials around the site should be limited, and materials must be transported in sealed bags/containers.
Weekly
- B6.10 All canisters that may be used to transport the hazardous materials (e.g. herbicide) to the point of use on the site must be regularly checked for leaks. Leaky canisters must be fixed before use.
Weekly
- B6.11 Mixing/decanting of all chemicals and hazardous substances must take place either on a tray or on an impermeable surface. Waste from these should then be disposed of to a suitable waste site.
Weekly
- B6.12 Should any spills of hazardous materials occur on the site or in the storage area, the relevant clean-up specialists must be contacted immediately. Materials that absorb fuel & oil, such as Drizit, sawdust or earth should be placed over the spill. This contaminated material must be uplifted and disposed off at a recognised disposal site.
Weekly
- B6.13 Vehicles transporting hazardous materials, including concrete, may not be washed on site.
Weekly
- B6.14 Lime, cement and other powders may not be mixed during excessively windy conditions.
Weekly
- B6.15 Spraying of herbicides may not take place under excessively windy conditions.
Weekly

B7 CONSTRUCTION VEHICLES/EQUIPMENT

- B7.1 Access to the property must be via the approved construction access routings. No other access route may be used onto the property.
Monthly
- B7.2 Choice of site for the storage of vehicles / equipment during the construction process must take into account location of local residents and sensitive natural areas on the property.
Monthly
- B7.3 Construction vehicles are to be fitted with standard silencers prior to the beginning of construction.
Monthly

- B7.4 Equipment that is fitted with noise reduction facilities (e.g. side flaps, silencers etc) must be used as per operating instructions and maintained properly during site operations.
Monthly
- B7.5 All vehicles and equipment used on site must be operated by appropriately trained and / or licensed individuals in compliance with all safety measures as laid out in the Occupational Health & Safety Act (OHSA).
Monthly
- B7.6 Vehicles and machinery are to be kept in good working order and to meet manufacturers specifications for safety, fuel consumption etc.
Monthly
- B7.7 Should excessive emissions be observed, the site manager is to have the equipment seen to as soon as possible.
Monthly
- B7.8 No vehicles of equipment may be serviced on the property unless in a properly bunded work zone.
Monthly
- B7.9 Vehicle parking/storage areas must be appropriately surfaced such that oil, fuel and other fluid leaks do not pollute soil or water resources.
Monthly
- B7.10 Large delivery vehicles/trucks must not be allowed to block the road or cause damage to the road surface.
Monthly
- B7.11 Storage and dispensing of fuels must be done in accordance with the controls detailed in Section B6.
Monthly

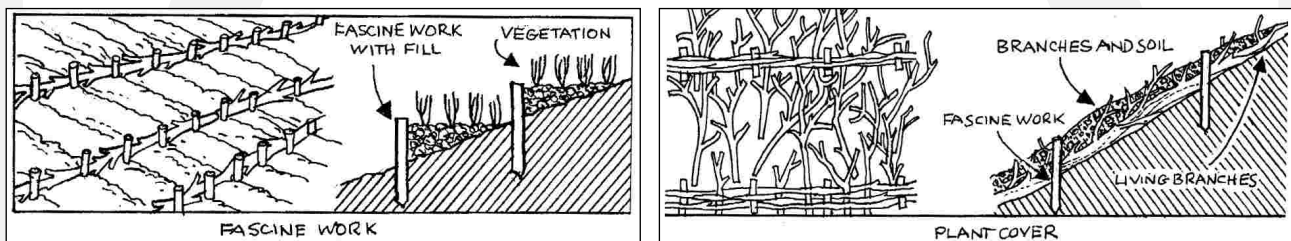
B8 WASTE MANAGEMENT & SANITATION

- B8.1 All solid waste generated during the construction process (including packets, plastic, rubble, cut plant material, waste metals etc) must be placed in the waste collection area in the Construction Camp and must not be allowed to blow around the site, be accessible by animals, or be placed in piles adjacent the skips / bins.
Monthly
- B8.2 Separation of waste and recycling of paper, glass etc must be encouraged. Composting of organic waste is encouraged.
Monthly
- B8.3 Hazardous materials that require disposal (cement, paints, solvents, old fuel / oil etc) must be disposed of to a registered hazardous landfill site. These materials may be removed by an appropriate hazardous waste contractor. Proof of appropriate disposal must be available to the ECO for scrutiny.
Monthly
- B8.4 The excavation of rubbish pits on site is not allowed.
Monthly
- B8.5 Burning of rubbish on site is not allowed.
Monthly
- B8.6 A site for a compost heap may be identified with assistance from the local environmental authority and Department of Water Affairs & Forestry.
Monthly

- B8.7 Adequate toilets must be available on site for use by construction staff at all times. These toilets must be moved with the work front.
Monthly
- B8.8 The digging of pit latrines for this purpose is not allowed under any circumstances.
Monthly
- B8.9 The use of surrounding lands, rivers, the dam, streams, or neighbours properties as a toilet is forbidden at all times.
Monthly
- B8.10 Should chemical toilets be used, an appropriate contractor must be employed to service these facilities on an ongoing basis.
Monthly
- B8.11 Spills or overflows from chemical or other toilets used by construction staff must be dealt with by a sanitation expert immediately.
Monthly
- B8.12 Littering on site is forbidden.
Monthly

B9 CLEARING OF VEGETATION & ALIEN PLANT CONTROL

- B9.1 The ECO is to provide permission prior to any vegetation being cleared for development.
Daily
- B9.2 Clearing of vegetation must be undertaken as the work front progresses – mass clearing is not allowed unless the entire cleared area is to be rehabilitated immediately.
Weekly
- B9.3 Should revegetation not be possible immediately, the cleared areas must be protected with packed brush, or appropriately battered with fascine work. Alternatively, jute may be pegged over the soil to stabilise it.
Weekly



- B9.4 Cleared areas can be sprayed with appropriate herbicides provided that these are such that break down on contact with the soil. Residual herbicides may not be used on the property.
Weekly
- B9.5 Cleared areas can be treated with organic soil conditioners such as filter press, bark chips, compost etc. Mass use of manure is not permitted.
Weekly

- B9.6 Clearing of vegetation is not allowed within 20m of any wetland, 80m of any forest, within 1:100 year floodlines, in conservation servitude areas or on slopes steeper than 1:3, unless permission is granted by the ECO for specifically allowed construction activities in these areas.
Weekly
- B9.7 Care must be taken to avoid the introduction of alien plant species to the site and surrounding areas. (Particular attention must be paid to imported material).
Weekly
- B9.8 Alien vegetation regrowth must be controlled throughout the entire site during the construction period.
Monthly
- B9.9 The alien plant removal and control method guidelines contained in Appendix C should be used when clearing invaded portions of the property.
Weekly
- B9.10 Clearing activities must be contained within the affected zones and may not spill over into demarcated No Go areas.
Daily
- B9.11 Pesticides may not be used on the property. Herbicides may be used to control listed alien weeds and invaders only.
Monthly
- B9.12 Wetlands (existing), forest edges, riverine fringe vegetation and potentially unstable areas must remain demarcated with appropriate fencing or hazard tape. These areas are no-go areas (this must be explained to all workers) that must be excluded from all development activities – workers entering these zones for any reason other than rehabilitation work must be disciplined.
Daily

B10 CONSERVATION OF SOIL RESOURCES

- B10.1 Wind screening and stormwater control must be undertaken to prevent soil loss from the site.
Monthly
- B10.2 The top 60-600mm of topsoil should be stripped off all areas in which construction is to take place/disturbance for creation of temporary access roads, and stockpiled for later use.
Monthly
- B10.3 Topsoil stockpiles are to be located within the development footprint of construction area. They should be placed on flat land where possible and outside any natural water movement pathway.
Monthly
- B10.4 Topsoil stockpiles must be protected from erosive forces and kept free of alien vegetation growth.
Monthly
- B10.5 Topsoil stockpiles must not be higher than 2m.
Monthly
- B10.6 The cutting of any materials that have been zinc galvanised, that may cause paint or other chemicals to disperse into the soil, must happen over a tray or impermeable surface to protect soil resources from contamination. Filings must be disposed of safely at an appropriate registered landfill site.
Monthly

B11 STORMWATER MANAGEMENT

B11.1 A stormwater management plan must be implemented during construction.

Monthly

B11.2 Stormwater run-off from hard-surfaced areas must be controlled at all times (no uncontrolled flows are allowed). The use of high velocity pipelines must be minimised. Open, vegetated, channels are preferable. In some cases, dispersed stormwater flows may be channelled onto open, flat vegetated areas.

Monthly

B11.3 The detention/retention ponds can be constructed to act as silt traps during the construction phase and should be cleared periodically.

Monthly

B11.4 Silt dredged from the ponds must be disposed of sensitively and under the guidance of the ECO. No silt may be dumped in an ad hoc fashion anywhere on site.

Monthly

B11.5 No earth channels or canals should be constructed without being properly stabilised with bank vegetation and natural flow breakers.

Monthly

B11.6 Outfalls of stormwater channels must be designed to avoid soil erosion. In order to achieve this, flow velocity and volume at the outfall must be reduced as much as possible. This should be done by using natural energy breakers such as rocks or dense vegetation mats.

Monthly

B12 EARTHWORKS

B12.1 Earthworks in No Go areas is not allowed, unless this is for construction of approved stormwater attenuation facilities.

Monthly

B12.2 Earthworks may not result in canalisation of any river or drainage area (except in the case of road bridges).

Monthly

B12.3 No earth, plant material, rocks, rubble or any other material whatsoever may be pushed into / across rivers, streams or drainage lines such that flow is constricted or sediment / pollution enters the flow.

Monthly

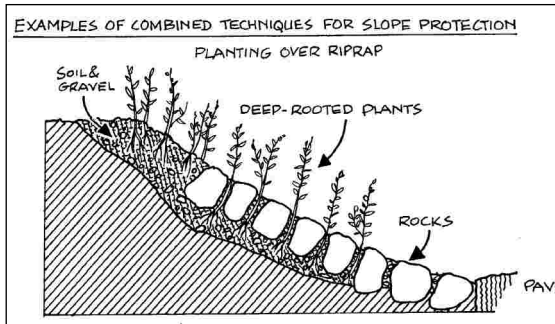
B12.4 Any accidental spillage of the above into a watercourse or other sensitive natural area must be removed and the area rehabilitated under the guidance of the ECO immediately.

Monthly

B13 REHABILITATION & LANDSCAPING

B13.1 Topsoiling and revegetation of areas disturbed by construction activities or earthworks must commence immediately after the completion of an activity.

Monthly



B13.2 Revegetation and landscaping must take place with 100% locally indigenous plant material. The species list contained in Appendix B is to be used.

Monthly

B13.3 Rehabilitated areas must be regularly watered and kept free of weed growth.

Monthly

B13.4 Plants for landscaping that require storage should be kept within a designated area. This area must be outside of all environmentally sensitive zones and may include a simple shade structure. Water for maintenance of stored plants may not be sourced from local water resources without permission from the relevant authorities.

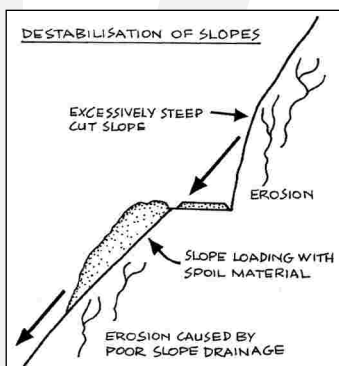
Monthly

B13.5 Areas that exist in a natural state may not be cleared or replanted to any other kind of vegetation than the naturally occurring habitat species.

Monthly

B13.6 Side tipping of spoil and excavated materials shall not be permitted – all spoil material shall be disposed of as directed by the Engineer.

Monthly



B13.7 Any eroded soil on paths / roadways / other areas must be collected and replaced in the area from which it was eroded. These high risk erosion areas must be protected from further soil erosion.

Monthly

B13.8 All rubble is to be removed from the site to an approved disposal site. A certificate of safe disposal at a permitted waste site must be provided by the contractor.

Monthly

B13.9 Burying of rubble on site, or dumping in drainage lines/rivers is prohibited.

Monthly

B13.10 Surfaces are to be checked for waste products from activities such as concreting or asphaltting and cleared in a manner approved by the ECO.

Monthly

B13.11 All embankments are to be trimmed, shaped and re-planted to the satisfaction of the ECO.

Monthly

B13.12 The Contractor is to check that all watercourses, including stormwater channels, are free from building rubble, spoil materials and waste materials.

Monthly

B13.13 All residual stockpiles must be removed to spoil or spread on site as directed by the ECO.

Monthly

B13.14 All leftover building materials must be removed from the site.

Monthly

B14 INFRASTRUCTURE CROSSINGS OF SENSITIVE AREAS

Infrastructure that could disturb sensitive natural environments include:

- Roads
- Electricity lines (buried)
- Water lines

B14.1 Infrastructure must be routed to coincide with road and pedestrian bridges.

Monthly

B14.2 Pipeline crossings of streams and rivers may not be constructed as weirs, or affect the water flow in any way.

Monthly

B14.3 All infrastructure in riverine areas must be protected/adequate to withstand 1:200 year floods without damage/failure.

Monthly

B14.4 The stormwater management plan must be used to guide the method of culvert construction. A wetlands expert and ECO must advise on the method at each site to ensure that wetland functionality is reinstated / enhanced. The wetland crossing method statement contained in Appendix D must be adhered to.

Monthly

B14.5 Any activities undertaken in stream areas should minimise damage and destabilisation of stream banks.

Monthly

B14.6 Where stream banks are destabilised, rehabilitation and stabilisation must be undertaken immediately. A wetlands expert and ECO must advise on the method to ensure that wetland functionality is reinstated/enhanced.

Monthly

B14.7 Infrastructure routings must be such that there is no need for permanently open servitude routes/lines in riverine zones.

Monthly

B14.8 Pedestrian bridges over streams should be designed such that they do not constrict flows and would disintegrate into relatively small pieces were they to be washed away by a significant flood. A wetlands expert and ECO must advise on the method to ensure that wetland functionality is reinstated / enhanced.

Monthly

B15 FENCING

B15.1 Installation of fencing must be done such that permeable sections are available at strategic points to allow small wildlife to pass through.

Monthly

B15.2 Fencing through No Go areas must be done under the guidance of the ECO. All areas of disturbance must be rehabilitated immediately in these zones.

Monthly

B15.3 Fencing through forest areas is not allowed.

Monthly

SECTION C: OPERATIONAL & MAINTENANCE ACTIVITIES

GENERAL PRINCIPLES FOR OPERATIONAL ACTIVITIES

1. The operation and maintenance of 101 Acutts Drive Family Estate should be sensitive to the surrounding area, and not cause nuisance or safety risks to local residents or businesses in the area.
2. Operation of the Estate should be undertaken in an environmentally sustainable manner, with minimum negative impacts, and maximum positive impacts.
3. The Homeowners Association should be approachable and transparent regarding activities that may affect the health or welfare of people in the area, and should aim to address any issues and complaints as best possible at all times.

C1 FENCING & SECURITY

- C1.1 Security staff employed on site must be aware of police and private security agents operating in the area, and work with these bodies in the prevention of crime in and around the property.
- C1.2 The security fencing and lighting used must not result in negative visual impacts.
- C1.3 The HO must make every attempt to discourage casual seekers of work from targeting the site. Once the staff complement in full, a notice should be placed on the gate indicating that no jobs are available on the property.
- C1.4 The perimeter fencing must continue to allow the passage of small animals onto and off the property, as well as natural water flow patterns.

C2 PROTECTION OF WATER RESOURCES & HUMAN HEALTH

- C2.1 All wastewater management systems must be operated and maintained in a good state by individual home owners.
- C2.2 Any spills of fuels, oils, or any other hazardous materials must be attended to immediately. Appropriate hazardous materials clean-up agents must be contracted immediately and the relevant authorities notified of the spill.

C3 SOLID WASTE MANAGEMENT

- C3.1 Solid waste must be collected at a central point. Sorting of the waste into organics, recyclable, hazardous and domestic waste should be undertaken at this point if possible.
- C3.2 All recyclable materials (glass, paper etc) should be regularly collected by a recycling agent or delivered to a recycling depot.
- C3.3 All hazardous waste must be collected & disposed of by a hazardous waste contractor.
- C3.4 A composting site may be identified on the property for disposal of the organic waste with permission from Department of Water Affairs & Forestry. This area would need to be away from sensitive natural environments, be screened (and fenced) and properly managed to avoid odour & insect nuisance.
- C3.5 Composted organic waste may be used on the property for soil conditioning in landscape maintenance provided that this does not occur within the 100 year floodline, within 200m of any wetland.

C4 STORMWATER MANAGEMENT & SOIL EROSION CONTROL

- C4.1 Surface run-off must be managed such that all run-off from hard-surfaced areas is contained within the engineered run-off channel or designated areas.
- C4.2 Open stormwater channels must be maintained in a well-vegetated state.
- C4.3 Silt collected in the silt traps/retention ponds must be regularly cleared and disposed of either as topdress for landscaped areas, or disposed of to a registered landfill site.
- C4.4 Any soil erosion must be attended to immediately.
- C4.5 Any surface run-off that may contain pollutants for any reason (e.g. following a fuel spill in the parking area) must be filtered before being discharged to the stormwater system.
- C4.6 Stormwater channel outfall points into watercourses must be stabilised at all times. Should soil / stream bank erosion become evident, appropriate remediation must be undertaken immediately.
- C4.7 An annual walk must be conducted to identify areas of soil erosion requiring repair.

C5 REHABILITATION & MANAGEMENT OF NATURAL HABITATS

- C5.1 Grasslands must be burnt once every year, between July and October. Firebreaks of at least 50m must be cleared around all forests, buildings and infrastructure. Burning must be done under the supervision of the conservation officer, ECO and fire department.
- C5.2 Alien plant growth must be controlled constantly. Hand pulling is the preferred technique, but herbicides may be used in cases where infestation is dense or cut stumps need treatment.

- C5.3 Trees have a natural lifespan, this must be acknowledged and new saplings encouraged to grow beneath old dying trees on the property.
- C5.4 No hunting of any wildlife may be undertaken on the property and no plants may be poached.
- C5.5 The forest areas may not be cleared without permission from the Department of Water Affairs & Forestry in terms of the National Forest Act requirements.
- C5.6 Residents must be provided with a planting palette and encouraged to maintain 100% indigenous plant coverage on their properties.
- C5.7 100% indigenous plant coverage must be maintained in all public zones.
- C5.8 The Homeowners Association(s) should establish an environment committee that assists residents with indigenous planting and habitat creation on their lands, and promotes appropriate management of the natural area zones on the property.
- C5.9 Trails on the property must be maintained in a good state with appropriate soil erosion control measures in place at all times.
- C5.10 A trails audit should be completed every 2 months, whereby problem sections (soil erosion, informal path development etc) is identified, and a plan for remediation developed.
- C5.11 Trails through the natural area zones must be clearly signed at all times, and people must be encouraged not to leave the paths, collect flowers, plants or wildlife.
- C5.12 Any nesting sites on the property should be protected with the erection of temporary notices encouraging people not to disturb the area.

APPENDIX A: CONTRACTOR PENALTIES SCHEDULE

The following penalty schedule reflects 4 different penalty scales relating to the severity of the offence and the associated costs of restoring the environment.

This schedule must form part of all construction contracts.

It must be noted that if any offence is committed by a contractor such that the requirements of national legislation is contravened and a subsequent legal process is initiated, then the responsible contractor will be subject to the associated criminal process and associated penalties (which may include a fine and / or imprisonment) as decided by the court. In this case, if the environmental penalty contained in the EMP is greater than the fine imposed by court, then the contractor will be subject to payment of the difference as per the requirements of the environmental penalty schedule.

In all cases, the contractor will be subject to a penalty for the offence committed, the monies from which will be used by a separate contractor to remediate the damage. The contractor that caused the damage may opt to remediate the damage themselves to the satisfaction of the ECO and Project Manager. In such cases a discount on the penalty may be negotiated with the ECO and Project Manager.

In addition to the schedule of penalties, a portion of the Retention on all contracts must be apportioned to compliance with the EMP. This portion should be no less than 25% of the total Retention amount, but may be increased depending on the levels of environmental risk associated with the contract. This proportion will be decided by the Project Manager with input from the ECO.

PENALTY SCHEDULE

Level	Description	Penalty	Offences
1	Minor offence	R1000 first offence R2000 second offence And R1000/per day that offence continues beyond notification of offence	<ul style="list-style-type: none"> Littering; inadequate or inappropriate on-site waste management or sanitation Uncontrolled noise and dust nuisance Poaching on site Inadequate soil / water protection controls for fuel storage & dispensing areas, vehicle parking areas
2	Moderate offence	R5000 first offence R10 000 second offence And R5000 per day that the offence continues beyond notification of offence	<ul style="list-style-type: none"> Trespassing onto neighbours properties Removal of indigenous trees marked for conservation purposes without the permission of the ECO, or trees in demarcated sensitive environmental zones Disposal of any form of waste to a non-approved dump site Any illegal /non-permitted abstraction or use of water from a natural resource The withholding of pertinent information or provision of false information to the ECO or Project Manager
3	Significant offence	R30 000 first offence R50 000 second offence And R30 000 per day that the offence continues beyond notification of offence	<ul style="list-style-type: none"> Non-compliance with any risk or safety management requirements Significant spillage of hazardous materials Use of natural materials not sourced from a legally permitted source Construction or use of roads/access across rivers, streams or wetlands that has not been authorized by the Project Manager and ECO
4	Serious offence	Up to R500 000 or total cost of rehabilitating damaged environment	<ul style="list-style-type: none"> Any serious pollution event or accident Any serious encroachment into demarcated sensitive environmental zones, by accident or on purpose Any serious stormwater damage that could have been avoided through appropriate management interventions

*** Note that the above figures represent the maximum fine amount in each instance**

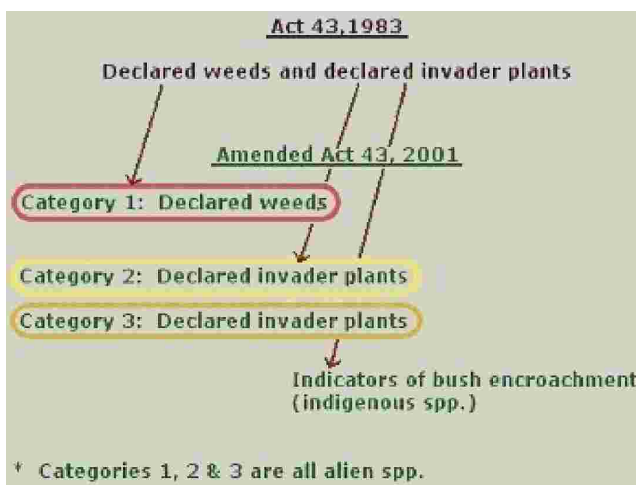
APPENDIX B: LANDSCAPING CODE

See separate document

APPENDIX C: ALIEN PLANT CONTROL GUIDELINES

The plants from the following list must not be planted on the property purposefully under any circumstances. Where these occur / grow up without intention, they should be removed as soon as possible.

ABBREVIATED INTERPRETATION - Act 43, 2001



CATEGORY 1: DECLARED WEEDS

- Prohibited plants
- Must be controlled, or eradicated where possible (except in biocontrol reserves, which are areas designated for the breeding of biocontrol agents)

CATEGORY 2: DECLARED INVADER PLANTS

- Mainly commercial plantation spp. but also plants for woodlots, animal fodder, soil stabilisation etc.
- Allowed only in demarcated areas under controlled conditions and in biocontrol reserves
- Prohibited within 30 m of the 1:50 year floodline of watercourses or wetlands, or as directed by the executive officer

CATEGORY 3: DECLARED INVADER PLANTS

- Mainly ornamental spp.
- No further planting allowed (except with special permission)
- No trade in propagative material
- Existing plants may remain but must be prevented from spreading
- Prohibited within 30 m of the 1:50 year floodline of watercourses or wetlands, or as directed by the executive officer

DECLARED WEEDS AND INVADER PLANTS

Botanical name	Common name	Type	Category	Special conditions
<i>Acacia baileyana</i> F. Muell.	Bailey-se-wattel/Bailey's wattle	Indringer/Invader	3	Kyk/See subreg. 15.C(7)(c)
<i>Acacia cyclops</i> A. Cunn. ex G. Don	Rooikrans/Red eye	Indringer/Invader	2	Kyk/See subreg. 15.C(7)(c)
<i>Acacia dealbata</i> Link	Silwerwattel/Silver wattle	Indringer/Invader	2	Kategorie 1 plant in Wes-Kaap/ Category 1 plant in Western Cape Kyk/See subreg. 15.C(7)(c)
<i>Acacia decurrens</i> (J.C. Wendl.) Willd.	Groenwattel/Green wattle	Indringer/Invader	2	Kyk/See subreg. 15.C(7)(c)
<i>Acacia elata</i> A. Cunn. ex Benth. (A. terminalis misapplied in S.A.)	Peperboomwattel/Pepper tree wattle	Indringer/Invader	3	
<i>Acacia implexa</i> Benth.	Screw-pod wattle	Onkruid/Weed	1	
<i>Acacia longifolia</i> (Andr.) Willd.	Langblaarwattel/Long-leaved wattle	Onkruid/Weed	1	
<i>Acacia mearnsii</i> De Wild.	Swartwattel/Black wattle	Indringer/Invader	2	Kategorie 1 plant in Suid Afrika, behalwe KwaZulu-Natal en Mpumalanga waar dit kommersieë verbou word/ Category 1 plant South Africa, except in KwaZulu-Natal and Mpumalanga where it is used commercially
<i>Acacia melanoxylon</i> R. Br.	Australiese swarthout/Australian blackwood	Indringer/Invader	2	Kyk/See subreg. 15.C(7)(c)
<i>Acacia paradoxa</i> DC (=A. armata R. Br.)	Kangaroo wattle	Onkruid/Weed	1	
<i>Acacia podalyriifolia</i> A Cunn.	Vaalimimosa/Pearl acacia	Indringer/Invader	3	
<i>Acacia pycnantha</i> Benth.	Gouewattel/Golden wattle	Onkruid/Weeds	1	
<i>Acacia saligna</i> (Labill.) H.L. Wendl.	Port Jackson/Port Jackson willow	Onkruid/Weeds	1	
<i>Agave sisalana</i> Perrine	Garingboom/Sisal hemp, Sisal	Indringer/Invader	2	
<i>Alhagi maurorum</i> Medik. (=A. camelorum Fisch.)	Kameeldoringbos/Camel thorn bush	Onkruid/Weed	1	
<i>Anredera cordifolia</i> (Tenore) Steen. {A. baselloides (H.B.K.) Baill. Misapplied in South Africa}	Madeira vine, Bridal wreath	Onkruid/Weed	1	
<i>Araujia sericifera</i> Brot.	Motvanger/Moth catcher	Onkruid/Weed	1	
<i>Argemone ochroleuca</i> Sweet subsp <i>ochroleuca</i>	Witblom bloudissel/White flowered Mexican poppy		Onkruid/Weed 1	
<i>Arundo donax</i> L.	Spaanse riet/Giant reed, Spanish reed	Indringer/Invader	3	
<i>Atriplex lindleyi</i> Moq. subsp. <i>inflata</i> Wilson (Muell.)	Blasiesoutbos/Sponge-fruit saltbush	Indringer/Invader	3	
<i>Atriplex nummularia</i> Lindley subsp. <i>Nummularia</i>	Oumansoutbos/Old man saltbush	Indringer/Invader	2	
<i>Azolla filiculoides</i> Lam.	Rooiwatervaring/Azolla, Red water fern	Onkruid/Weeds	1	Kyk/See subreg. 15.C(7)(c)
<i>Caesalpinia decapetala</i> (Roth) Alston (= C. sepiaria Roxb.)	Kraaldoring/Mauritius thorn	Onkruid / Weed	1	
<i>Campuloclinium macrocephalum</i> (Less.) DC. (=Eupatorium macrocephalum Less.)		Onkruid/Weed	1	
<i>Cannabis sativa</i> L.	Hemp only, not dagga	Onkruid/Weed	2	Beheerde aanplanting/ Controlled cultivation
<i>Cardaria draba</i> (L.) Desv.	Peperbos/Pepper-cress, Hoary cardaria, White top	Onkruid/Weed	1	
<i>Cardiospermum grandiflorum</i> Swartz	Blaasklimop/Balloon vine	Onkruid/Weed	1	

Botanical name	Common name	Type	Category	Special conditions
<i>Casuarina cunninghamiana</i> Miq.	Kasuarisboom/Beefwood	Indringer/Invader	2	Slegs vir gebruik as windbrekers en nie vir duin stabilisasie nie/ Only for use as windbreakers, not for dune stabilisation
<i>Casuarina equisetifolia</i> L.	Perdestertboom/Horsetail tree	Indringer/Invader	2	Slegs vir gebruik as windbrekers en nie vir duin stabilisasie nie / Only for use as windbreakers, not for dune stabilisation
<i>Cereus jamacaru</i> DC. (<i>C. peruvianus</i> misapplied in S.A)	Nagblom/Queen of the Night	Onkruid/Weed	1	
<i>Cestrum aurantiacum</i> Lindl.	Oranjesestrum/Yellow or Orange cestrum	Onkruid/Weed	1	
<i>Cestrum laevigatum</i> Schlecht.	Inkbessie/Inkberry	Onkruid/Weed	1	
<i>Cestrum parqui</i> L'Hérit	Inkbessie/Chilean cestrum	Onkruid/Weed	1	
<i>Chromolaena odorata</i> (L.) R.M. King & H. Robinson (=Eupatorium odoratum L.)	Paraffienbos, Chromolaena/ Triffid weed, Chromolaena	Onkruid/Weed	1	
<i>Cirsium vulgare</i> (Savi) Ten. (=C. lanceolatum Scop.)	Skotse dissel, Speerdissel/ Scotch thistle, Spear thistle	Onkruid/Weed	1	
<i>Convolvulus arvensis</i> L.	Akkerwinde, Klimop / Field bindweed, Wild morning-glory	Onkruid/Weed	1	
<i>Cortaderia jubata</i> (Lem.) Stapf	Pampasgras/Pampas grass	Onkruid/Weed	1	
<i>Cortaderia selloana</i> (Schult.) Aschers. & Graebn.	Pampasgras, Silwergras/Pampas grass	Onkruid/Weed	1	
<i>Cotoneaster franchetii</i> Bois.	Dwergmispel/Cotoneasters	Indringer/Invader	3	
<i>Cotoneaster pannosus</i> Franch.	Silwerdwergmispel/Silver-leaf cotoneaster	Indringer/Invader	3	
<i>Cuscuta campestris</i> Yunck.	Gewone dodder /Common dodder	Onkruid/Weed	1	
<i>Cuscuta suaveolens</i> Ser.	Luserndodder/Lucerne dodder	Onkruid/Weed	1	
<i>Cytisus monspessulanus</i> L. (=C. candicans (L.)DC., <i>Genista monspessulana</i> (L.) L. Johnson)	Montpellier broom	Onkruid/Weed	1	
<i>Datura ferox</i> L.	Grootstinkblaar/Large thorn apple	Onkruid/Weed	1	
<i>Datura innoxia</i> Mill.	Harige stinkblaar/Downy thorn apple	Onkruid/Weed	1	
<i>Datura stramonium</i> L.	Gewone stinkblaar/Common thorn apple	Onkruid/Weed	1	
<i>Echinopsis spachiana</i> (Lem.) Fiedr. & Rowley {=Trichocereus spachianus (Lem.) Riccob.}	Orrelkaktus/Torch cactus Pers echium/Patterson's curse	Onkruid/Weed Onkruid/Weed	1 1	
<i>Echium plantagineum</i> L. (= <i>E. lycopsis</i> L.)				
<i>Echium vulgare</i> L.	Blou – echium/Blue echium	Onkruid/Weed	1	
<i>Egeria densa</i> Planch. (= <i>Elodea densa</i> (Planch.) Casp.	Waterpes/Ditch moss, Water thyme	Onkruid/Weed	1	
<i>Eichhornia crassipes</i> (Mart.) Solms-Laub.	Waterhiasint/Water Hyacinth	Onkruid/Weed	1	
<i>Elodea canadensis</i> Michaux	Canadian water weed	Onkruid/Weed	1	
<i>Eucalyptus camaldulensis</i> Dehnh.	Rooibloekom/Red river gum	Indringer/Invader	2	Kyk/See subreg. 15.C(7)(c)
<i>Eucalyptus cladocalyx</i> F. Muell.	Suikerbloekom/Sugar gum	Indringer/Invader	2	Kyk/See subreg. 15.C(7)(c)
<i>Eucalyptus grandis</i> Hill ex Maid (<i>E. saligna</i> Sm. (p.p.))	Salignabloekom/Saligna gum, Rose gum	Indringer/Invader	2	Kyk/See subreg. 15.C(7)(c)
<i>Eucalyptus lehmannii</i> (Schauer) Benth.	Spinnekopbloekom/Spider gum	Indringer/Invader	3	
<i>Eucalyptus paniculata</i> Sm.	Gryssysterbasbloekom/Grey ironbark	Indringer/Invader	2	Kyk/See subreg. 15.C(7)(c)
<i>Eucalyptus sideroxylon</i> A. Cunn. ex Woolls	Swartysterbasbloekom/ Black ironbark, Red ronbark	Indringer/Invader	2	Kyk/See subreg. 15.C(7)(c)

Botanical name	Common name	Type	Category	Special conditions
<i>Gleditsia triacanthos</i> L.	Amerikaanse dieldoring, Soetpeulboom/ Honey locust, Sweet locust	Indringer/Invader	2	
<i>Hakea drupacea</i> (Gaertn.f) Roemer & Schultes (=H. suaveolens R. Br.)	Soethakea/Sweet hakea	Onkruid/Weed	1	
<i>Hakea gibbosa</i> (Sm.) Cav.	Harige hakea/Rock hakea	Onkruid/Weed	1	
<i>Hakea sericea</i> Schrad.	Syerige hakea/Silky hakea	Onkruid/Weed	1	
<i>Harrisia martinii</i> (Lab.) Britton Moon cactus, <i>Harrisia cactus</i>	Toukaktus, <i>Harrisia</i> kaktus/	Onkruid/Weed	1	
<i>Hypericum perforatum</i> L.	Johanneskruid/St. John's wort, Tipton weed	Indringer/Invader	2	Beheerde aanplanting/ Controlled cultivation
<i>Ipomoea indica</i> (Burm.f.) Merr. (=I. Congesta R. Br.)	Purperwinde/Morning glory	Indringer/Invader	3	
<i>Ipomoea purpurea</i> (L.) Roth	Purperwinde/Morning glory	Indringer/Invader	3	
<i>Jacaranda mimosifolia</i> D. Don	Jakaranda/Jacaranda	Indringer/Invader	3	Kyk/See subreg. 15.C(7)(c)
<i>Lantana camara</i> L. en enige entiteit wat deels of geheel ontstaan het uit die <i>Lantana camara</i> kompleks deur verbastering of seleksie op natuurlike of kunsmatige wyse/and any entity which has partly or wholly been derived from the <i>Lantana camara</i> complex by means of hybridisation or selection under natural or artificial conditions	Lantana/Lantana, Tickberry	Onkruid/Weed	1	
<i>Leptospermum laevigatum</i> (Gaertn.) F. Muell.	Australiese mirt/Australian myrtle	Onkruid/Weed	1	
<i>Leucaena leucocephala</i> (Lam.) De Wit	Reuse wattel/Leucaena	Indringer/Invader	2	Kyk/See subreg. 15.C(7)(c)
<i>Ligustrum japonicum</i> Thunb.	Japanese liguster/Japanese wax – leaved privet	Indringer/Invader	3	
<i>Ligustrum lucidum</i> Ait.	Chinese liguster/ Chinese wax – leaved privet	Indringer/Invader	3	
<i>Ligustrum ovalifolium</i> Hassk.	Kaliforniese liguster/Californian privet	Indringer/Invader	3	
<i>Ligustrum sinense</i> Lour.	Chinese liguster/Chinese privet	Indringer/Invader	3	
<i>Ligustrum vulgare</i> L.	Gewone liguster/Common privet	Indringer/Invader	3	
<i>Litsea glutinosa</i> (Lour.) C.B. Robinson (=L. sebifera Pers.)	Indiese lourier/Indian laurel	Onkruid/Weed	1	
<i>Lythrum salicaria</i> L.	Purple loosestrife	Onkruid / Weed	1	
<i>Macfadyena unguis-cati</i> (L.) A. Gentry	Katteklouranker/Cat's claw creeper	Onkruid/Weed	1	
<i>Melia azedarach</i> L.	Maksering, Bessieboom/ "Syringa", Persian lilac	Indringer/Invader	3	Kyk/See subreg. 15.C(7)(c)
<i>Metrosideros excelsa</i> Soland. Ex. Gaertn. (=M. tomentosa A. Rich.)	Nieu-Seelandse perdestert/ New Zealand bottle brush	Indringer/Invader	3	
<i>Mimosa pigra</i> L.	Giant sensitive plant	Onkruid/Weed	1	
<i>Morus alba</i> L.	Witmoerbe, Gewone moerbe/ White mulberry, Common mulberry	Indringer / Invader	3	Kyk/See subreg. 15.C(7)(c)
<i>Myoporum tenuifolium</i> Forst. F. (M. acuminatum misapplied in S.A.)	Manatoka	Indringer / Invader	2	
<i>Myriophyllum aquaticum</i> (Vell.) Verdc.	Waterduisendblaar/Parrot's feather	Onkruid/Weed	1	
<i>Myriophyllum spicatum</i> L.	Spiked water-milfoil	Onkruid/Weed	1	
<i>Nassella tenuissima</i> (Trin.) Barkworth (=Stipa tenuissima Trin.)	Witpolgras/White tussock	Onkruid/Weed	1	

Botanical name	Common name	Type	Category	Special conditions
<i>Nassella trichotoma</i> (Nees) Hack. ex Arech. (= <i>Stipa trichotoma</i> Nees)	Nassella polgras/Nassella tussock	Onkruid/Weed	1	
<i>Nerium oleander</i> L.	Selonsroos/Oleander	Onkruid/Weed	1	Steriele kultivars uitgesluit/ Excluding sterile, double-flowered cultivars
<i>Nicotiana glauca</i> R.C. Grah.	Wildetabak/Wild tobacco	Onkruid/Weed	1	
<i>Opuntia aurantiaca</i> Lindl.	Litjieskaktus/Jointed cactus	Onkruid/Weed	1	
<i>Opuntia exaltata</i> Berger	Langdoringkaktus/Long spine cactus	Onkruid/Weed	1	
<i>Opuntia ficus-indica</i> (L.) Mill.	Boereturksvy, Grootdoringturksvy/ Mission prickly pear, Sweet prickly pear	Onkruid/Weed	1	Uitgesonderd alle doringlose cultivars en seleksies / Excluding all spineless cultivars and selections
<i>Opuntia humifusa</i> (Raf.) Raf. (= <i>O. compressa</i> (Salisb.) (Macbride)	Large flowered prickly pear, Creeping prickly pear	Onkruid/Weed	1	
<i>Opuntia imbricata</i> (Haw.) DC. {= <i>Cylindropuntia imbricata</i> (Haw.) Knuth}	Imbrikkaktus, Kabelturksvy/ Imbricate cactus, Imbricate prickly pear	Onkruid/Weed	1	
<i>Opuntia lindheimeri</i> Engelm.	Klein rondblauarturksvy/ Small round-leaved prickly pear	Onkruid/Weed	1	
<i>Opuntia monacantha</i> Haw. (= <i>O. vulgaris</i> Mill.)	Suurturksvy, Luisiesturksvy/ Cochineal prickly pear, Drooping prickly pear	Onkruid/Weed	1	
<i>Opuntia rosea</i> DC.	Roseakaktus/Rosea cactus	Onkruid/Weed	1	
<i>Opuntia spinulifera</i> Salm-Dyck	Blouturksvy, Groot rondblau turksvy/ Saucepan cactus, Large roundleaved prickly pear	Onkruid/Weed	1	
<i>Opuntia stricta</i> (Haw.) Haw.	Suurturksvy/Pest pear of Australia	Onkruid/Weed	1	
<i>Orobanche minor</i> Sutton	Klawerbesemraap, Bremraap/ Lesser broomrape, Clover broomrape	Onkruid/Weed	1	
<i>Paraserianthes lophantha</i> (Willd.) Nielsen (= <i>Albizia lophantha</i> (Willd.) Benth.)	Australiese Albizia, stinkboon/ Australian Albizia, Stink bean	Onkruid/Weed	1	
<i>Parthenium hysterophorus</i> L.	Parthenium	Onkruid/Weed	1	
<i>Passiflora coerulea</i> L.	Siergrenadella/Blue passion flower	Onkruid/Weed	1	
<i>Passiflora edulis</i> Sims	Grenadella/Purple granadilla, Passion fruit	Indringer/Invader	2	
<i>Pennisetum setaceum</i> (Forssk.) Chiov.	Pronkgras /Fountain grass	Onkruid/Weed	1	
<i>Pennisetum villosum</i> R. Br. ex Fresen.	Veergras/Feathertop	Onkruid/Weed	1	
<i>Pereskia aculeata</i> Mill.	Pereskia/Barbados gooseberry	Onkruid/Weed	1	
<i>Pinus elliotti</i> Engelm.	Basden/Slash pine	Indringer/Invader	2	Kyk/See subreg. 15.C(7)(c)
<i>Pinus halepensis</i> Mill.	Aleppoden/Aleppo pine	Indringer/Invader	3	Kyk/See subreg. 15.C(7)(c)
<i>Pinus patula</i> Schlecht. & Cham.	Treurden/Patula pine	Indringer/Invader	2	Kyk/See subreg. 15.C(7)(c)
<i>Pinus pinaster</i> Ait.	Trosden/Cluster pine	Indringer/Invader	2	Kyk/See subreg. 15.C(7)(c)
<i>Pinus radiata</i> D. Don	Radiataden/Radiata pine	Indringer/Invader	2	Kyk/See subreg. 15.C(7)(c)
<i>Pinus taeda</i> L.	Loblollyden/Loblolly pine	Indringer/Invader	2	Kyk/See subreg. 15.C(7)(c)
<i>Pistia stratiotes</i> L.	Waterslaai/Water lettuce	Onkruid/Weed	1	
<i>Pittosporum undulatum</i> Vent.	Australiese kasuur, Soet Pittosporum/ Australian cheesewood, Sweet pittosporum	Onkruid/Weed	1	
<i>Pontederia cordata</i> L.	Pickel weed	Indringer/Invader	3	Kategorie 1 in landelike gebiede/ Category 1 in non-urban areas
<i>Populus alba</i> L.	Witpopulier/White poplar	Indringer/Invader	3	Kyk/See subreg. 15.C(7)(c)
<i>Populus deltoides</i> Bart. ex. Marsh	Vuurhoutjipopulier/Match poplar	Indringer/Invader	2	
<i>Populus x canescens</i> (Ait.) J. E. Sm.	Vaalpopulier/Grey poplar	Indringer/Invader	3	Kyk/See subreg. 15.C(7)(c)

Botanical name	Common name	Type	Category	Special conditions
<i>Prosopis glandulosa</i> Torr. var <i>torreyana</i> (Benson) Johnston and hybrids/en hibriedes	Heuningprosopis/Honey mesquite	Indringer/Invader	2	
<i>Prosopis velutina</i> Wooton and hybrids/en hibriedes	Fluweelprosopis/Velvet mesquite	Indringer/Invader	2	
<i>Psidium guajava</i> L. and hybrids/en hibriedes	Koejawel/Guava	Indringer/Invader	2	
<i>Psidium guineense</i> Swartz	Brasiliaanse koejawel/Brazilian guava	Indringer/Invader	3	
<i>Psidium littorale</i> Raddi var <i>longipes</i> (O. Berg) Fosb. (= <i>P. cattleianum</i> Sab.)	Aarbeikoejawel/Strawberry guava	Indringer/Invader	3	
<i>Pueraria lobata</i> (Willd.) Ohwi	Kudzuranker/Kudzu vine	Onkruid/Weed	1	
<i>Pyracantha angustifolia</i> (Franch.) C.K. Schneid.	Geelbranddoring/Yellow firethorn	Indringer/Invader	3	
<i>Pyracantha crenulata</i> (D. Don) M.J. Roem.	Rooivurdoring/Himalayan firethorn	Indringer/Invader	3	
<i>Ricinus communis</i> L.	Kasterolieboom/Castor-oil plant	Indringer/Invader	2	
<i>Robinia pseudoacacia</i> L.	Witakasia/Black locust	Indringer/Invader	3	Kyk/See subreg. 15.C(7)(c)
<i>Rorippa nasturtium - aquaticum</i> (L.) Hayek (= <i>Nasturtium officinale</i> R. Br.)	Bronkors/Watercress	Indringer/Invader	3	
<i>Rosa rubiginosa</i> L. (= <i>R. eglanteria</i> L.)	Wilderoos/Eglantine, Sweetbriar	Indringer/Invader	3	
<i>Rubus cuneifolius</i> Pursh. and hybrid R x <i>proteus</i> C.H. Stirton	Amerikaanse braam./American bramble	Onkruid/Weed	1	
<i>Rubus fruticosus</i> L. agg.	Braam/European blackberry	Indringer/Invader	2	
<i>Salix babylonica</i> L.	Treurwilger/Weeping willow	Indringer/Invader	3	
<i>Salix fragilis</i> L.	Crack or brittle willow	Onkruid/Weed	1	
<i>Salvinia molesta</i> D. S. Mitchell and other species of the Family Salviniaceae	Watervaring/Kariba weed	Onkruid/Weed	1	
<i>Schinus terebinthifolius</i> Raddi	Brasiliaanse peperboom/Brazilian pepper tree	Indringer/Invader	3	Kyk/See subreg. 15.C(7)(c)
<i>Sesbania punicea</i> (Cav.) Benth.	Rooi sesbania/Red sesbania	Onkruid/Weed	1	
<i>Solanum elaeagnifolium</i> Cav.	Satansbos/Silver-leaf bitter apple	Onkruid/Weed	1	
<i>Solanum mauritianum</i> Scop.	Luisboom/Bugweed	Onkruid/Weed	1	
<i>Solanum seafortianum</i> Andr.	Aartappelranker/Potato creeper	Onkruid/Weed	1	
<i>Solanum sisymbriifolium</i> Lam.	Wildetamatie, Doringtamatie/ Wild tomato, Dense-thorned bitter apple	Onkruid/Weed	1	
<i>Spartium junceum</i> L.	Spaanse besem/Spanish broom	Onkruid/Weed	1	
<i>Tamarix ramosissima</i> Ledeb.	Perstamarisk/Pink tamarisk	Indringer/Invader	3	
<i>Tamarix chinensis</i> Lour.	Chinese tamarisk/Chinese tamarisk	Indringer/Invader	3	
<i>Tecoma stans</i> (L.) H.B.K.	Geelklokkies/Yellow bells	Onkruid/Weed	1	
<i>Tipuana tipa</i> (Benth.) Kuntze	Tipoeboom/Tipu tree	Indringer/Invader	3	Kyk/See subreg. 15.C(7)(c)
<i>Tithonia diversifolia</i> (Hemsl.) A. Gray	Mexikaanse sonneblom/Mexican sunflower	Onkruid/Weed	1	
<i>Tithonia rotundifolia</i> (Mill.) S.F. Blake	Rooisonneblom/Red sunflower	Onkruid/Weed	1	
<i>Toona ciliata</i> M.J. Roem. (= <i>Cedrela toona</i> Roxb. ex Rottl. & Willd.)	Toonboom/Toon tree	Indringer/Invader	3	Kyk/See subreg. 15.C(7)(c)
<i>Ulex europaeus</i> L.	Gaspeldoring/European gorse	Onkruid/Weed	1	
<i>Xanthium spinosum</i> L.	Boetebos/Spiny cocklebur	Onkruid/Weed	1	
<i>Xanthium strumarium</i> L.	Kankerroos/Large cocklebur	Onkruid/Weed	1	