DAINTREE LIVING FACTSHEET

Driveways (beta ver. 1.0)

In the Daintree, driveways that appear suitable during the drier months may be heavily bogged and stripped of gravel cover or flooded and impassable during the wet season. A good driveway is a life-long project here, and even those that are well designed and constructed contribute to erosion, land clearing and habitat fragmentation. A poorly designed, constructed or maintained driveway has a significantly higher negative impact on the environment, and can prove to be very costly.

Related Factsheets

Structures (pdf, [file size]) *Assessing existing structures, construction materials, foundations, floors, frames, verandahs, windows and roofing.*

Erosion (pdf, [file size]) *Land clearing and habitat fragmentation; weather, wind and rain; regeneration.*

Water Sources (pdf, [file size]) *Water table and rainfall fluctuations; contamination and filtration; water conservation and recycling, Water system installation and maintenance issues for rain, stream/creek, and bore sources.*

Until recently, permits were not required for access construction, consequently you may have inherited a poorly designed driveway. If your driveway is in very poor condition, avoid using it until you can at least lay more gravel or install cement strips. Otherwise you are likely to cause additional damage which will be more costly to repair. In assessing access to your property, consider your driveway design, drainage, surfacing and surrounding vegetation.

Design

The design of your driveway is important. You can avoid wheel ruts by making the driveway wide enough to vary the path of a vehicle. A winding driveway will slow water flow and consequently minimise erosion. Try to avoid creek crossings but if you cant you will need to use large diameter piping (500mm+) in drains or in flood creeks to control erosion and high rainfall water movement. Soil loss can be minimised using siltation traps that spread rather than concentrate the water flow. This will minimise impacts and reduce the chance of contaminating creeks.

Drains

- Drains at the edge of the driveway should direct water away from the road, especially on corners.
- Drains can be filled with rocks, and vegetation (native!) planted along the edges will help slow the water flow down and allow it to soak into the ground.
- Make sure the driveway has sufficient camber to allow water to run into gutters and drains
- Avoid crossing drainage lines and consider a causeway if necessary.
- Clear your drains annually
- Consider that trench diggers or backhoes are smaller and less damaging than the larger excavators for digging gutters and laying drainage.

Surfacing

Steep slopes (greater than one in five) are often shallow and unstable. You may need to consider cement (two strips) or bitumen on the wheel tracks and piping and curbing for drains. Another

option is to put down geocloth, lay gravel on, and then compact it by running a heavy vehicle over it. Note that You may need to lay extra gravel or road base, as often as every year. Straight gravel has no coherence and will wash off in heavy rain, so you need to use a mix of gravel and clay. On swampy ground a coarser road base may be needed to ensure the road is hardened for vehicle use.

Surrounding vegetation

Although you may need to trim overhead branches for delivery and/or construction vehicles, we recommend that you clear as little vegetation as possible. There is evidence that forest canopy can help protect your driveway from wind and rain erosion. Further, earthworks can cause damage to tree roots resulting in die-back and tree fall, causes the adjacent forest to dry out, and may introduce diseases and weeds to your property. These in turn can result in erosion damage on your property and elsewhere in the forest.

We suggest that you plan your work so it is completed well before the wet season.

- Austrop Foundation
