

Daintree Landholders Information Kit

1. INTRODUCTION

At the end of 1995, the Daintree Community Information Liaison Committee (DCILA), which represents 8 landowner groups in the area, had written, produced and posted out to all landowners north of the Daintree River a copy of the Landholders Information Kit.

The aim of the Kit was to assist landowners settle on their properties and to increase the awareness of landowners to the resources and ideas that are available in the area. The local Community felt it was essential that future residents should seek advice before construction.

Having sought advice, new landowners could make well informed decisions about their land whilst causing the least environmental impact during the properties development. The Kit was specifically targeted to new settlers to the area and for those people who have never lived in the Daintree or a remote tropical rainforest environment.

The Daintree is a special place to all that settle and live here. The need for an information kit describing the best ways to live and build a home in the area was a priority for local residents. It was felt that many of the difficulties faced by new landowners could be lessened by sharing local knowledge and advice. This second version of the Kit provides some updated information but importantly includes a summary of the Douglas Shire Planning Scheme which was gazetted in December 1996 and outlines the legal requirements for development in the area.

Of the 1182 freehold blocks that have been subdivided and zoned for rural residential or Rural (General) development between the Daintree and Bloomfield Rivers, about 300 already have dwellings constructed on them.

Between 1994 and 1998, with Commonwealth and State funding the Daintree Rescue Program acquired 83 allotments north of the Daintree River, constituting 19% of the total area of freehold land. This will eventually be incorporated into the World Heritage Area.

This is a growing community and since settlement began, many issues and concerns have been raised on the future management of the area. A divisive debate on the balance between education and legislation has ensued.

The Landholders Information Kit forms part of an overall education and awareness program which was established and coordinated by the DCILA and the community, but is now the responsibility of the Douglas Shire Council (DSC).

The Kit has been designed to act only as a guide and should be used in combination with the free Landholders Advisory Service. Planning applications and Vegetation Clearance Permits should be sought through the Douglas Shire Council 'M (07)4099.9450.

WHY A LANDHOLDERS ADVISORY SERVICE

This is a free service which provides on-site advice from the DSC Environmental Officer, with cultural surveys by the Mossman Gorge Community Rangers. The Advisory Service works with the landowner, on-site, to help landowners identify environmental and cultural heritage features, plan and design a home in the Daintree. Your use of the Advisory Service is strongly encouraged as the starting point for your development.

Many of the problems faced by landholders are encountered during the initial stages of construction. Local residents will advise you that the first priorities for residential development in this region will be your driveway access and house pad site.

Poorly constructed driveways and house pad sitting can cause erosion and vegetation loss which in turn reduces the natural values of the block. One of the most often repeated complaints by some landowners is "If only I'd known more about the place before I built"

We hope this Information Kit will help you avoid being in this predicament and will provide a common sense approach to planning, design and living considerations for your residential development on the Daintree Coast.

For further advice and information please contact the Douglas Shire Council Environmental Officer on (07) 4099 9450.

DISCLAIMER

The Council will not be liable for any indirect, special or consequential loss or damage occasioned as a result of any change occurring and not being published herein, or in any claims arising out of the inaccuracy of any information contained in this publication.

Prior to acting on this document the user should check with the Council to ensure that it is up to date.

2. DOUGLAS SHIRE COUNCIL PLANNING REQUIREMENTS.

Generally, the aim of the Council is to provide suitable facilities for residents while maintaining the environmental values of the area.

BACKGROUND

Town planning in the Shire is managed by reference to the Douglas Shire Planning Scheme.

Most of the planning controls and restrictions are contained within Development Control Plan 3 (DCP3) of the Planning Scheme. This can be found in section four of the Scheme and should be read in conjunction with Sections 6,8,9 &10 which contain the criteria applicable to development.

The Local Law on Vegetation Management is also relevant, as a permit from Council is required before clearing a driveway or house pad site.

Best environmental practices are widely promoted for all developments within the Development Control Plan area.

DOCUMENTS

The core planning documents can be found at the Mossman Library, Diwan Community Centre (Cow Bay), or direct from the Douglas Shire Council. Some background reading about the region is recommended before you commence planning.

Douglas Shire Planning Scheme contains the majority of the planning regulations for the Shire and the following sections are, relevant to and will affect your planning application:

| <i>Section</i> | <i>Subject</i> |
|----------------|---|
| 4.0 | Development Control Plan 3 (Daintree Bloomfield). |
| 6.0 | Zoning |
| 8.0 | Development Requirements General |
| 9.2.2 | Accommodation uses for dwelling houses |
| 10.0 | Development Requirements Particular Zones |
| 12.0 | Administrative Provisions |

Local Law No.56 (Vegetation Management):

Being in place since September 1997, this law requires rural landowners to obtain a permit if they wish to clear any naturally occurring vegetation.

A Vegetation Preservation Area has been designated for the land zoned in the DSC Planning Scheme as:

| | |
|---|---------------------|
| 1 | Rural (Agriculture) |
| 2 | Rural (General) |
| 3 | Residential Rural |

The last two zones contain all of the freehold properties north of the Daintree River.

WHERE TO START!

Within the Douglas Shire Planning Scheme you may find it easier to start at section 12.0 Administrative Provisions. This section looks at some of the questions that you need to address in your planning application to Council.

When completing your planning application it is important to stress your provisions for best environmental practices. Many of the recommendations that are incorporated within this Information Kit will help you achieve this.

Council will make a judgment on your application as to whether your proposal agrees or conflicts with the planning scheme. Although there are some strict guidelines, there is room to justify your requests and discuss potential conflicts with Council.

The section below summarises most of the main points that you must consider when completing your planning application for Council approval.

A SUMMARY OF DOUGLAS SHIRE PLANNING REGULATIONS

1. **Land:** No subdivision will be approved and there are no plans to permit the rezoning of additional rural residential areas in the Daintree to Bloomfield area of the Shire.
2. **Access:** A development shall not be approved where there is inadequate access. No internal road should exceed 4.0 metres in width where the site is steeper than 1 in 6, except for the provision of a vehicle turning area.
3. **Water:** You must prove to Council that you have a reliable supply of potable water for dwelling use, and before building application approval, you must satisfy Council that you have adequate water storage for your dwelling. All development must be served by a suitable storm water drainage system discharging to a lawful point of discharge as approved by Council. Applications will be refused if Council believes your block is not reasonably capable of being drained.
4. **Sewage:** No treated or untreated waste water is to be discharged into a watercourse. The disposal of solids (septic sludge) should be in a manner and location satisfactory to the Council. Your preferred waste water disposal should be accompanied by Council engineering advice. Any application that includes a sewage system other than the Council specified septic tank/trench should include information on product design, manufacturer and make. All waste water disposal shall make provision for a holding tank of an approved capacity to accept waste water that cannot be disposed of due to climate, physical or environmental constraint.
5. **Form and Character of Development:** Developments should be sited and designed so as to minimise vegetation clearance and visual obstruction. No development will, be permitted if it represents an unacceptable visual intrusion on the landscape.
 - Maximum building height is 7.5m with a maximum two stories above ground level. No building should be erected within 20m from the front boundary, except where physical constraints make a set back impractical.
 - No building or other structure shall be erected within 25 metres of other boundaries in Rural (General) and Rural (Ag) zoned land, or 10m on Residential Rural land.
 - Maximum site coverage – 400m², 4% of the site or whichever is greater. Blocks on Cape Tribulation Road need to be re-vegetated with at least a 10m vegetation buffer. Building design requirements can be obtained from the Council.
 - All building should be subordinate to the environment. A Pole Home, of rudimentary design rather than Queenslander style is preferred. It is a condition of approval under the Planning Scheme that telecommunication provision has to be sought before building approvals.

KNOW YOUR BOUNDARIES

It is essential to find out where your land boundaries are and that of your nearest neighbour. The Douglas Shire Council have detailed maps of the area which show the boundaries of each block.

The Douglas Shire Council will seek the advice of the Wet Tropics Management Authority (WTMA) if your development is proposed within or adjoining the Wet Tropics World Heritage Area and / or likely to have an impact on the values of that area.

For larger developments that fall into this category an EIS will be required. The main impacts that concern WTMA and EPA are :

1. **Rare and Threatened Flora and Fauna:** Detailed flora surveys sometimes need to be undertaken to make sure development does not have an impact. Similarly, there are some areas where threatened fauna may be a concern (eg : fences can be a problem for Cassowaries).
2. **Fires:** Consider measures to minimise fire danger.
3. **Domestic Animals:** Limit domestic animals and restrain dogs in Cassowary habitat areas.
4. **Visual Amenity:** Make sure the roads and buildings are appropriately sighted and follow the building and design guidelines.
5. **Erosion:** Install silt traps and appropriate drainage structures (including cross drains on roads).

Before you clear and begin constructing your dwelling you will have to obtain and complete from the Douglas Shire Council office:

DSC REQUIREMENTS

A Permit to Damage Protected Vegetation so that you can clear a driveway and house pad site is required.

The next step is to complete a Development Application for dwelling approvals on Residential Rural and Rural (General) zoned land. A Development Application for Building Approval (Building Permit) will then have to be completed as well as, a Development Application for Plumbing and Drainage.

Except in the case of a dwelling - house or forest access an Environmental. Impact Statement (EIS) shall be required to be prepared where any removal of Category 1 vegetation is proposed.

3. PROPERTIES WITHIN THE WET TROPICS WORLD HERITAGE AREA

A small number of properties in the Douglas Shire are located within the Wet Tropics World Heritage Area. These properties are mostly in the Daintree River to Cape Tribulation district (about 30 properties are partly or fully within the WHA).

World Heritage listing occurs under an international convention which Australia is party to. The Wet Tropics listing took place in 1988 and covers a wide range of tenures including national parks, state forests and reserves, crown leases, aboriginal land as well as freehold. The WHA stretches from Townsville to Cooktown and covers about 900,000 hectares.

Only those properties within the World Heritage Area are affected by the legislation and management plan affecting the area. The World Heritage regulations are in addition to those of Douglas Shire Council and are primarily directed at minimising the impact of land use and development activities on vegetation, and impacts caused by earthworks and stream works.

The Wet Tropics Management Authority is responsible for these regulations and can be contacted for further information on (07)4052.0555.

3.1 ACCESS AND HOUSE SITE

Try to avoid hasty decisions which may limit your future options and will cost you more time, money and effort in the long term.

BACKGROUND

The DSC Planning Scheme outlines a number of conditions which relate to the use of earthworks for the construction of a driveway access and house site.

If you are going to use any earthmoving machinery during the construction of your dwelling, that will change the natural surface levels of your block, permission and construction conditions must be sought from the Douglas Shire Council before work begins. If permission is not sought the Council can, at their discretion, refuse to approve a building plan.

The Council can also ask for a security bond from you to ensure that the performance of the works carried out will fulfil any of the conditions requested by Council.

Remember, you will also require a permit to clear vegetation on your property from DSC before you begin earthworks for your driveway and house site.

It is therefore recommended that you contact the Douglas Shire Planning Services Department as the first point of contact (4099.9450).

Many of the initial difficulties encountered by landholders in the past have been caused by inappropriate or poorly positioned earthworks.

It is therefore wise to seek advice and information before you start your development.

The DSC Environmental Officer can provide advice on :

1. Guidance on locating a driveway and house site depending on the topography, soil type, watercourses, vegetation and cost.
2. Vegetation - as some blocks may have plant species that are rare or threatened, or provide important habitat for wildlife.
3. Cultural Heritage Surveys - A survey of any pre existing Cultural Heritage sites such as walking tracks, camp sites, shell middens, artefacts etc.. can be arranged with the Kuku Yalanji people.

All earthworks in the area require an appropriate drainage system and erosion control measures. Soil loss can be minimised using storm water drains with silt traps that spread rather than concentrating the water flow. This will minimise impacts and reduce the chance of contaminating creeks which neighbours- may be using to access clean (potable) drinking water.

HOUSE SITE SELECTION

Deciding on locating a house site and access on to your block is not a straightforward task as there are a number of important practical factors to consider as well as Council requirements.

During the Wet Season, from December to May, rainfall may exceed 3000mm; temperatures reach nearly 35°C with 95% humidity. The Daintree Coast is a particularly unusual place due to the closeness and steepness of the surrounding mountain ranges and water runoff is fast and often via what is termed "overland flow" which can quickly cause flooding.

The water table in the low lying flat country is often very high and can be 'boggy' or 'swampy' during the wet season months. Thus, land which may initially appear suitable during the drier months may become flooded during the wet season.

It is therefore important to walk your land during and after a period of rain to become familiar with its contours and natural movement of water through the block.

Identify the direction of any slopes on the land for the most suitable locations for a house site that will suit your needs.

Many blocks in the Daintree have a steep gradient. If you have selected a block with a steep gradient and you have decided to site your house on high ground then your driveway construction will become a significant cost. After each wet season ongoing maintenance costs may become a financial burden so it is recommended that in such circumstances that you allocate sufficient funds to build a stable driveway.

Generally land with a slope gradient that is less than 1 in 15 (6.6%) or flat ground are the easiest and least costly sites to develop. Access and house sites should be selected to avoid swampy areas or high water tables to prevent flooding during the wet season,

Land that has a slope gradient of less than 1 in 5 (20%) are more than suitable for building and construction and normally has good drainage. Site access is generally easier with lower erosion problems.

Land that has a steep slope with a gradient greater than 1 in 5 (25%) should generally be avoided as the soil is often shallow and unstable with a high erosion potential. Construction on such sites is not impossible but is expensive where access and stabilising the house site becomes extremely difficult.

When selecting a suitable location for a house site and access it is essential that you consider a number of Council conditions that will affect your decisions.

It is recommended to obtain a detailed survey and identification of the existing vegetation on your property; so that the location of house and access will minimise impact on Rare and Threatened species, or wildlife habitat which may exist on your property. The DSC Environmental Officer and Greening Australia can provide such surveys.

A permit to clear vegetation from the proposed site for the access and house should then be obtained from SC, based on the flora survey information.

The Council will approve a planning application and a building permit for the construction of a dwelling if the following factors are addressed adequately, namely:

1. Minimisation of earthworks, erosion and scaring.
2. Minimisation of the visual impacts when viewed from road ways or locations available to the public.
3. Maintenance, as far as possible, of the natural vegetation and the replanting of native species
4. Protection of native animals and the preservation of native wildlife corridors.
5. Has a secure, potable (clean) water supply.
6. Has a system of waste water disposal that does not impact on the environment of the area
7. Avoids noise nuisance as a result of generator use.

To achieve the Douglas Shire Council's requirements to minimise vegetation clearance and excavation and to avoid visually obtrusive development in the area the Council can impose conditions on:

1. The location and orientation of buildings on the land as well as the height, site cover, form, materials and/or colours of buildings.
2. The extent of the site clearance and the amount of excavation or fill.
3. The rehabilitative landscaping and the retention of specified trees or graves of trees.

4. The fencing, both location and materials.
5. Arrangements for water supply and waste water disposal.
6. The location of generators and noise level measures.
7. The location, configuration and construction of driveways.
8. Signage advising of the name of the owner, letter boxes and the like.

In addition house site selection will also be dependent on set backs. A 'set back' is the distance structures are constructed from any road or allotment boundary. If your block is located on any of the main roads (Bailey Creek Rd., Cape Tribulation Rd.), no building can be erected within 25 metres of these road boundaries. Council will also require that a dense vegetation visual screen should be retained or planted between these roads and your building. For other roads and land boundaries, no buildings should be erected within 10 metres of the boundary and 20m to other access roads.

Exception to these rules can be permitted if any of the natural features of the block physically prevents construction of a building within the legal setback distance, which may be due to creek lines or gradients.

In addition, house site selection will also be dependent on the maximum site coverage (house site and living area) which can be 4% of the block's total area or 400 square metres of the block, whichever is the greater.

Contact the DSC Environmental Officer or the DSC Planning Department before clearing and construction begins so that your proposed plan and ideas for a home in this area meets the Douglas Shire Council Planning Scheme requirements and suits your needs.

LAND ACCESS

No development will be approved by the Council unless there is adequate access to the block. The DSC will not approve planning applications if the driveway access is not of sufficient pavement strength to support the nature and volume of future traffic use.

Driveway access should also maintain canopy cover or a proposed re-vegetation plan that will result in canopy cover. No internal road should exceed 4 metres in width where the site is steeper than 1 in 6 (16.6%) except for the provision of a turnaround area.

It is advisable that when making a decision on the location of the driveway access on a steep gradient that the driveway follows the natural contours of the land. A driveway that is designed to follow the natural contours of the land will be easier to maintain and will be much less prone to loss of road base or road stabiliser. This will also lessen the maintenance costs after each wet season

Unless a driveway is concreted or suitably stabilised with an appropriate drainage design, a direct driveway on a steep slope should always be avoided.

A concreted driveway will allow you to follow a more direct route on the block, if the water flow off the concreted driveway is controlled and directed into a good drainage system. It is not permissible to drain water flow onto a neighbouring block even if the block is vacant.

If your driveway is going to cross a watercourse, the crossing must follow the Department of Natural Resources Riverine Protection Guidelines. Vehicle crossings should be designed in accordance with the following criteria:

1. The width of the disturbed area should not exceed six (6) metres where possible.
2. The crossing should be located on a straight section of the stream.
3. Natural stream bank levels should not be breached.
4. The crossing formation should not impound the water.

5. Provision should be made for the conveyance of stream low flows.
6. Access cuttings should be directed downstream.
7. Erosion protection works should be provided as necessary.

If you have selected large trees which are to be retained near to the house site or driveway, care should be taken during any earthworks. Marking trees which you would like to retain near to your house with survey tape and talking to the machine operator before the work begins is essential and will help prevent inadvertent tree damage.

Damage to tree roots and trunks can introduce diseases which can result in tree death and subsequent tree fall. If the tree is damaged during construction, it may not be of immediate concern, as tree death and subsequent tree fall will not occur immediately.

Large trees near your home should always be monitored for any signs of damage or disease that may cause tree fall during storm activity. A good indicator is fungal growth around the roots or trunk. Fungal invasion of the tree can indicate a disease or infection within the tree and potential die-back.

In such a situation, contact the DSC Environmental Officer who will be able to make an assessment of the tree and provide advice on its health status and possible need for removal.

DRAINAGE

All developments must be served with a suitable storm water drainage system which discharges into a lawful point of discharge as approved by the Council.

The storm water drainage systems must be capable of accepting the water flow from the whole of your block and from the greater water catchment area. To ensure that this is undertaken, the Council may require a detailed engineering report to show how the storm water is controlled and discharged from your block.

The work done to ensure proper drainage into the public drainage system has to be undertaken at your own expense.

THE HOUSE SITE

Depending on your final house design and budget, house foundations can consist of either a cement slab or raised floor construction.

A cement slab construction will- be a permanent structure, so you have to be certain about the positioning of the house site and particularly drainage.

On sloped sites you will have to provide access to machinery to allow for levelling, cut, fill, removal and/or reuse and stabilisation of soils which meets Council specifications. It is advisable to consider the provision of an area for building material storage.

Raised floor constructions are recommended on sloped gradients and swampy areas to provide good ventilation and drainage. These houses can be dismantled and moved to another site if required. Raised floor constructions require minimal or no ground levelling, but may require a crane to lift the poles into place. Access for the crane will also have to be considered.

The height of any proposed building or structure must not exceed 7.5 metres with a maximum of 2 stories above the ground level.

SUMMARY AND RECOMMENDATIONS

1. Seek local advice and knowledge about the block and ask what happens to the water flow during the wet season.

2. Contact the DSC who will provide information on vegetation clearance permits, planning and locating a driveway access, house site and drainage design which complies with the Douglas Shire Planning Scheme requirements.
3. Ensure that the driveway access is:
 - wide enough to vary the path of a vehicle so it does not cause wheel ruts and erosion (4m),
 - has a sufficient camber to allow water to run off the driveway into gutters and drains at the edges,
 - caters for future traffic use.
4. Use silt traps that dump silt, slows down water movement and allows water to soak into the ground.
5. Use rock filled drains where the water movement is fast and causes erosion. Drains filled with rocks and palms planted along the edges will help slow the water movement down and allow it to soak into the ground.
6. On steep gradient driveways (1 in 5 or greater) the use of cement or bitumen is essential to create wheel tracks or seal the driveway completely.
7. The use of piping and curbing for good drainage is recommended and will reduce many erosion problems, allowing cleaner water to run off your driveway.
8. On a flat gradient or gentle sloping driveway, ensure that you use 100mm of road base on a compacted soil surface to provide a stable driveway access.
9. If your driveway crosses a creek or watershed, ensure that you use a large diameter pipe (500mm+) or ford to control water movement and erosion, especially during high rainfall periods.

DURING CONSTRUCTION

1. Discuss with the machine operator (or better still an engineer) the most suitable drainage system to suit your driveway and house site. The use of the above mentioned drainage recommendations should be addressed.
2. Use survey tape to mark trees and vegetated sites that you do not want to be disturbed. Discuss this direct with the machine operator and make sure they understand, your requirements.
3. Earthworks can be planned in stages or completed in one visit. If they are planned in stages over a number of Dry Seasons, it is essential that any earthworks undertaken are stabilised by compaction, re vegetation and drainage.
4. Plan the earthworks so they can be broken down into stages that can be easily monitored. Be very specific and clear about the work you want done and plan with the operator precisely the aim of your development. Do not leave the works site before you are happy with the end result and that the job was completed according to the plan.

3.2 WATER SUPPLY

Consider all of your household water requirements present and future before deciding on the most suitable system to meet your household needs.

BACKGROUND

Water quality is the single most important health and conservation issue in the area north of the Daintree and the Douglas Shire. The poor disposal of sewage and/or waste water can have serious implications on your options for obtaining clean water due to the increased risk of bacterial and viral contamination of the ground water source.

In addition, a poor drainage system can also have serious implications on water quality by increasing the sedimentation loads in creeks due to soil loss. This will not only have a downstream affect on neighbours who may be extracting water for household use but will also have an impact on the mangroves and near shore coral reef ecosystems.

Increased sedimentation of creeks and waterways can lead to a reduction of local fish stocks as well as impacting on shell fish and crustacean (e.g. crab) populations.

As there is no reticulated water supply in the Daintree, there are only three options for obtaining clean (potable) water. These include:

1. A bore water system.
2. Rainwater collection.
3. Creek water use.

The Council requires that all development must be served by a reliable supply of clean water adequate for the needs of the proposed use of the property and must be to the satisfaction of the Manager Engineering Services.

In addition there are a number of legal requirements to consider if you are using creek water to supply your household needs which must be sought from the Department of Natural Resources (DNR) and relate to water use for domestic supplies and irrigation.

If you are unsure about the quality of your drinking water you can contact the Environmental Protection Agency which monitors water quality or the Plumbing Inspector at DSC.

BORE WATER

Bore water extraction is the most common method of obtaining a water supply in the area. It is important to position a bore hole above or at least 15 metres away from a septic absorption trench.

Bore water holes are practical on sloping or high ground where there is little chance of contamination of the ground water supply from waste water disposal. It would also be wise to investigate your neighbours' sewage disposal methods in relation to your drinking water supply. This is very important in more densely populated areas, or where development on residential land lays up-slope of your property

It would be recommended to test the bore water initially for its suitability to be used for drinking, and on a regular basis thereafter depending on the initial results.

RAINWATER

A normal house roof can collect sufficient rainwater to maintain all household requirements if used wisely. A roof with a total surface area of 150 square meters can collect approximately 150 litres of rainwater for every 1mm of rain fall. Remember that average annual rainfall on the Daintree Coast is 3000 to 4000 millimetres.

Installation of leaf guards in your guttering or leaf catchers at the end of drains will reduce water impurities, maintenance and the need to clear significant areas of vegetation.

CREEK WATER

For any use of a creek or watercourse, be it for domestic use, irrigation or driveway crossing you must contact the DNR in Mareeba (074092 2555), who will assess your application, provide guidelines and can issue permits.

The extraction and use of water from a watercourse is governed by the Water Resources Act 1989. The definition of a water course includes bed, banks and any other element of a river, creek or stream that confines or contains water.

This effectively means that even if the creek is part of your property you do not own the creek as defined by a watercourse.

If you are intending to use creek water for domestic purposes you must apply for a permit under the Water Resources Act. The permit will be issued without a charge. Under the Act, no guarantee is given that the water supply is potable.

If you are intending to use the creek for irrigation purposes you must apply for a waterworks licence and a fee of \$55 will be charged. Your application and intending use of the watercourse will be advertised in the local paper and will allow public comment and objections to your proposal. The DNR will assess your application in relation to the quantities of water extracted, down stream effects and implications to the whole water catchment area.

RECOMMENDATIONS

1. Plan your water requirements to take into account the dry season from June to December. If you are reliant on collecting rainwater then you must have sufficient storage capacity to provide water to your household during this period.
2. Water conservation is important and designing a house that minimises water usage is important. The use of a dual flush toilet or a composting toilet, mist shower roses, and re-use of treated waste water, if practical, will minimise fresh water consumption.
3. Consider positioning your storage tank at a higher point than your dwelling or on a tank stand so it can gravity feed water to your dwelling.
4. A suitably installed hydraulic ram can pump water more than 30 meters to gravity feed tank. Rams are cheap, highly reliable, simple to install but noisy.
5. If you are going to collect and use creek water, a spring or creek head settling tank (1000 litres or so), is recommended to collect mud that would otherwise enter the water line. The settling tank must have a large drain tap at the bottom to allow the mud to wash out. The outlet water line should be positioned half way up the tank to allow clean water to flow to your home.

3.3 SOLID WASTE AND WASTE WATER DISPOSAL.

New technologies are being developed to dispose of household waste, but there is still no easy solution.

BACKGROUND

The Council has strict guidelines on the disposal of solid waste and waste water (sewage). As no reticulated sewage system is supplied north of the Daintree River, waste disposal is the full responsibility of each landowner.

The Council requires that all development shall be served by a waste water disposal system that meets the satisfaction of the Council. The preferred method of waste water disposal must be accompanied by engineering advice and where applicable, Environmental Protection Agency advice and/or approval.

Council also stipulates that no discharge of waste water to any watercourse, whether treated or untreated, shall be permitted.

Council may require as a condition of approval of the dwelling that sewage effluent disposal areas must be set back a specified distance from any watercourse.

Any waste water treatment and disposal system must make provision for a holding tank of an approved capacity to accept waste water not able to be disposed of due to the effects of extreme wet weather.

Any solids or other waste products from a waste water treatment and disposal system shall be disposed of by the applicant in a manner and in a location to the satisfaction of Council.

The use of a simple long-drop toilet (hole in the ground) is illegal. This system of sewage disposal is one of the main sources of contamination of the ground water supply.

As the disposal of sewage depends on a number of factors it is advisable to discuss your options with the Douglas Shire Council Plumbing Inspector.

SEWAGE TREATMENT OPTIONS

To meet Council requirements, there are three different options that are recommended for solid waste and waste water disposal. These include:

- 1 A septic tank.
- 2 A composting toilet.
- 3 A self-contained sewage treatment plant.

Both a septic and composting sewage treatment system will require the construction of an absorption trench. Only a self contained sewage treatment plant can take both sewage and grey water waste and does not require an absorption trench.

ABSORPTION TRENCH

An absorption trench is a rock filled trench covered by topsoil. Normally a 100mm pipe with a series of holes is laid along its length and placed amongst rock fill. Waste water and grey water from the house drains into the pipe where it leaches into the trench and filters through the rocks in the ground.

The absorption trench will vary in length depending on the number of people using the system but has a minimum Council required length of 20m long by 600 mm wide by 600mm deep. This is required for a normal two bedroom household. The Council will require that the trench length will increase by 4m for every bedroom added or additional house hold occupant. For example, a 3 bedroom dwelling will require a 24m long trench.

If the block does not physically enable the trench to be located in a single, continuous length, then the trench can be U-shaped or divided into sections. For example, three lengths of 6 metres, placed at different locations around the house will still meet Council requirements. One section for kitchen grey water, one for bathroom grey water, and the last for toilet waste water.

The fact that absorption trenches can overflow, highlights the negative aspects of an absorption trench which does not perform any biological activity on the effluent and cannot remove bacteria, viruses or nutrients (nitrates and phosphates) from the waste water area.

It is therefore of paramount importance that you select the location of the absorption trench very carefully. The absorption trench should be built in a relatively dry spot which has good surrounding drainage and good ground soakage.

Also remember that the grey water waste which comes from the kitchen, bathroom, shower and hand basins is normally untreated before entering an absorption trench.

You can reduce the nutrient load within the absorption trench by using low phosphate and nitrate household detergents, soaps and chemicals. This is important if you are using bore water to source water for drinking purposes.

A septic tank and absorption trench system are the minimum Council requirements for sewage treatment in this region.

SEPTIC TANKS

A septic tank works by collecting solid waste and waste water, which is flushed from the toilet, and stored in the tank. The septic tank contains bacteria which starts to break down sewage waste. As the solid waste is heavier than waste water, it accumulates at the bottom of the tank and slowly breaks down. The waste water at the top of the tank then overflows into the absorption trench.

Remember that tanks should be carefully managed as the bacteria can be destroyed or deactivated if household chemicals such as bleach are flushed through the system.

Tanks have to be de-sludged (emptied) every 3-5 years during normal household use. All septic tanks require grease traps for kitchen and bathroom grey water.

Septic systems work more effectively on blocks that have little vegetation, have a slight gradient and good drainage.

Septic systems built on blocks in low lying areas which are subject to flooding or have a shallow water table are less efficient and may overflow on occasions during high rainfall. It is recommended that a composting toilet be considered in these circumstances.

COMPOSTING TOILETS

For landholders whose property is subject to flooding or poor drainage, a composting toilet system is recommended.

There are a number of different composting toilet systems on the market but all use the same method of disposal which effectively converts waste into garden compost.

Composting toilets do not require water or a holding tank. Use no chemicals. Produce no pollutants. Require a power source for the ventilation fan.

A composting toilet uses a combination of air and heat to reduce solid waste to a humus that can be used in the garden. It needs a source of power (240 volt AC or 12 volt DC) to maintain a fan and heater. The composting toilet technology is relatively new in this region and requires regular maintenance to function efficiently in tropical climates. The main problem is evaporating the waste water during the wet season. Power options must be considered to allow the fan to be switched on at all times during this wet period.

As with a septic system, grey water should bypass the composting toilet and be directed straight into the absorption trench.

The disadvantage of all composters is that the bins are high-set and require an elevated room. For buildings with raised floors this should not present a problem but for a slab construction, an elevated toilet room will be

necessary. It is not advisable to bury the compost bin in this environment due to the possibility of fluid build-up in the chamber, which can turn the bin septic.

If maintained properly a composting toilet is odourless and can be cleaned like a normal toilet, using a sponge to wipe the outside surface, but ensuring that washing water or disinfectant does not go into the system.

System maintenance, including aerating the contents of the bin and checking the fan battery, makes these systems more appropriate for houses with permanent residents.

SELF-CONTAINED TREATMENT PLANTS

The advantage of a domestic sewage treatment plant is that it will treat all your waste water, sewage and grey water. There is no need for an absorption trench and treated waters can be used for irrigation purposes.

The treatment process is similar to a municipal sewage treatment plant using a series of settlement and aeration cycles. Bacterial activity and de-nitrification processes breakdown the waste material.

It is important to manage this system like any other sewage system, and you should use low phosphate detergents and reduce chemical use such as bleach which will kill bacterial activity

Chlorine in the form of tablets is added to the treated water which can be used for irrigation purposes. You must consult with the Council for irrigation advice and drip feeders are recommended in preference to sprays, to reduce the chance of airborne dispersal of bacteria.

A self contained sewage system requires a power source to maintain aeration fans and pumps, and the system can be run on a battery storage facility. A typical self contained sewage system requires 280 watts of power for intermittent cycles but advice should be sought from the supplier for individual household requirements.

3.4 POWER

It is important to evaluate all your power *considerations* before you decide on a suitable power supply system.

BACKGROUND

With the exception of a few properties in the Forest Creek area, a reticulated electrical supply is not available to households in the region north of the Daintree River.

There are a number of possible ways to meet your electrical power requirements, but before embarking on the purchase of a power generating system, you should carefully evaluate your power needs and living considerations.

Two common approaches currently exist for providing electric power. The first is to have a generator which must be run when power is required.

The second is to generate power by a generator or a renewable energy source and store power generated in batteries (12, 24 or 48 are common voltages). The power can then be used directly as DC power, or converted into 240V AC power by an inverter. It is more efficient to use the power directly as DC, but more convenient to use AC from your inverter.

Most small systems use a mixture of both. It is advisable to seek assistance before deciding as your power choice will have an impact on the nature and cost of your house wiring and choice of appliances.

Renewable energy can be via solar, hydro or wind. Wind is not a suitable source here, and for some properties in the area, a mixture of hydro and solar can provide power. A state government subsidy of \$7,500 is available for the installation of stand-alone power systems incorporating renewable energy components.

The majority of properties using renewable power have a generator to charge batteries during the wet season and/or during periods of cloudy weather (there are approximately 200 rainy days per year). A power controller system can be installed which will start the generator automatically when the batteries become low.

Most residents in the region manage their power resources by using energy efficient products and adapting their household usage and behaviour to suit their power supply.

Items such as irons, hair dryers and kettles draw a lot of power. For example, most electric kettles draw approximately 2400 watts, therefore requiring at least a 2.5 KVA generator to provide enough power for the kettle.

A gas fridge will cost you about two times more than an equivalent sized electrical fridge but will reduce generator usage. The use of halogen energy efficient and long lasting bulbs is also recommended.

A generator can be your primary source of power or can act as a back up to an alternative source of power. It is advisable to have a generator on your property whatever your source of power. A water cooled generator is significantly quieter than an air cooled generator but is more expensive.

Generally household choices vary in power output from 1 KVA to 7.5 KVA depending on your power requirements.

Generators can be run on either diesel or petrol. A diesel generator has a stronger engine, is cheaper to run and will last longer than a petrol engine but a petrol engine is about half the price of a diesel engine.

Inverters come in 3 types : square-wave, modified square-wave and sine wave, and in a variety of power capabilities. Modern inverters are now almost all sine wave. Care should be taken if you decide to use an older or second-hand inverter, which may be either square or modified wave and thus not compatible with a wide range of appliances.

Permanent installation of inverters over 1 KW in capacity requires the services of a competent electrical contractor and your premises must be wired to Australian Standard. Whatever power system you chose, other

than the simplest portable generator, you will need to have the building appropriately wired for 240V AC, DC or both. These installations should only be carried out by a suitably qualified electrical contractor.

Whatever system you have adopted to supply power, the yearly running cost, including set up, replacement and ongoing maintenance will be approximately \$3000 to \$3500 per year.

GENERATORS

To decide what size generator you will require, make a list of all electrical appliances that you need and consider using gas items such as gas fridges and gas/solar water heaters to reduce electrical power use. The size of your generator should be selected to provide for the peak load you are likely to require, assuming that you will not attempt to run all your loads at once. To keep on good terms with your neighbours, a well ventilated, sound proof generator shed is recommended.

A 2.2 KVA generator is more practical and provides a source of power for lights, TV, stereo, a small washing machine, most water pumps, a small deep freeze, most workshop tools and is the minimum requirement for most microwaves.

SOLAR POWER

Solar power is used in a number of households in the area and the technology has significantly improved over the years. There are a number of considerations for use of solar power and advice should be sought on:

1. The suitability of your block for solar power.
2. The availability of sunlight.
3. The need to clear vegetation to maximise daily exposure of the solar panel to sunlight.

It is important to obtain good advice on what solar power system will suit your dwelling. The supplier should design an energy profile with you which should include electrical appliances used, number of people in the household and lifestyle.

When positioning a solar panel, find an area that receives good periods of sunlight and position the panel facing due north. As the best hours for collecting sunlight are between 10AM and 2PM, trees which block sunlight between those hours may have to be removed or thinned.

The panels can be mounted on the roof, or on an elevated platform to minimise the clearing required. Mounting panels on top of a water tank stand is another option. Panels should be mounted in such a way so as to be accessible for cleaning.

It is better to overestimate the amount of power that you will need. Most solar energy systems rely on the battery bank to provide continuity of power which should be sized to give 35 days of power supply in the absence of sunlight.

It usually takes a few weeks to become familiar with the system. It is necessary to establish a routine for checking battery voltage levels on the control panel, water levels in the battery and keeping the terminals clean. Solar panels need to be kept mould free to maximise their efficiency and should be cleaned every two weeks on average.

BATTERIES

At present, the operation of any renewable power system requires a certain amount of understanding by the owner on operating procedures and basic maintenance. They are not altogether 'user friendly', although recent developments in technology are making this less of a problem. For example, batteries will require periodic topping up and solar panels require cleaning.

Batteries used to store power from a generator or renewable energy system, must be the correct type and will be a major investment. Truck and car batteries can be used but will only supply a high starting current for a short period of time and will then need to be charged again.

For remote power supplies, 'deep-cycle' batteries are more appropriate, as these can be repeatedly charged and discharged over many cycles.

Special 'deep-cycle' batteries which have large electrolyte volumes, reduce the need for service and ideally should have built-in hydrometers which will give you the state of charge of the battery.

Over sizing your battery bank means' that they will last longer because of having less discharge cycles and can last for 10 or more years if well maintained. Beware of second hand batteries as they may have had a hard life and lost most of their storage capacity. The supplier should be prepared to guarantee second-hand batteries for at least two years.

Battery connections must be properly made and kept clean. Batteries should be housed in a well vented cupboard.

HYDRO POWER

Hydro power (water generated electricity) may be suitable for some blocks. If you intend using creek water for any purpose you will need to contact the Department of Natural Resources in Mareeba who need to authorise use and issue a permit.

GOVERNMENT SUBSIDIES

The Remote Area Power Supply (RAPS) Rebate Scheme is administered by the Queensland Department of Minerals and Energy and provides financial assistance to landowners for the installation of stand-alone power systems.

A rebate of 75% of the cost of renewable energy and related components of a remote area power supply system or \$7,500, whichever is the lesser amount, will be paid to applicants that satisfy the guideline conditions.

A Solar Hot Water Rebate Scheme is also currently available through the Department of Minerals and Energy. A \$500 rebate towards the cost of a new two panel solar hot water system, or a \$300 rebate towards a one panel system is available.

For more information on either of these schemes, contact Energy Wise on 12 1300 369 388.

3.5 HOUSE DESIGN

MAXIMUM USE OF LIGHT, VENTILATION & THERMAL INSULATION

High rainfall and humidity make living in the rainforest quite different to living elsewhere.

BACKGROUND

Homes built in tropical rainforests can *be* comfortable and functional all year round provided the climate is taken into account.

Personal preferences will influence your final house design, but regardless of materials used, some common design principles need consideration.

MAXIMUM USE OF SPACE

- Avoid wasting space through extensive hallways and oversized rooms.
- Verandahs provide access to rooms and extend living areas.
- Taller narrower dwellings require less vegetation clearing on heavily forested blocks.
- Positioning rooms such as kitchens, laundries, bathrooms and toilets close to each other will allow for easy installation of plumbing for water and waste disposal services.

Maximum Use of Light, Ventilation & Thermal Insulation.

Positioning your house with the longest axis oriented east-west will reduce the effect of the sun during the hottest part of the day and reduce power requirements fan fare.

Ceiling heights of 3m or more in conjunction with elevated air vents will allow heat to rise and escape above head height, and reduce mildew. The roof should be light in colour and the roof space should be well insulated for coolness in summer.

Verandahs of 2-3m or large eaves overhangs of 700- provide protection for walls and living spaces from the sun and rain and prevent the sun from heating internal walls.

Because of the high humidity, it is wise to take into account the prevailing direction of breezes on your block. This will allow for free movement of air through the house and have the dual purpose of both cooling and drying.

Positioning verandahs or open areas in a breezeway will be an advantage for drying clothes in the wet season. It is also; wise to ensure that internal partitions do not block the natural flow of air.

Fixed small windows tend to reduce ventilation and should be avoided if possible. The use of timber or glass louvers aids ventilation, while still having the ability to be closed when necessary in rainy periods.

Skylights also can be an essential part of providing a source of light. All openings, especially to the roof space, should be well sealed or meshed to prevent rats and snakes taking up residence in the roof and walls.

Fly-screening obstructs air flow and encourages fungal growth. If mosquito's are not a bother to you, use 3/8" (10mm) galvanised wire mesh instead of fly screening on the outside of windows to prevent entry of rodents.

MATERIALS

Because the combination of high humidity and high rainfall creates mould conditions, it is wise to consider finishes for surfaces such as walls and cupboards which can be easily cleaned. Textured surfaces such as concrete blocks are difficult to keep clean from mould.

If you intend collecting water for drinking purposes, it will be necessary to consider guttering which will reduce leaf impurities.

If guttering is not required, the use of technique is recommended. This consists of rock filled channels or swales built below the roof edge which reduce erosion and splash and allow water to soak into the ground. Ferns can be planted within the rock base to help this process.

A block home has a high retention of heat and may require a cooling system. Material costs for concrete block constructions are relatively low, but labour costs must be taken into account.

A raised floor construction provides for ventilation and drainage. Timber poles dug into the ground must be treated for termites/white ants before construction and checked regularly thereafter. Timber poles can be raised above the ground and avoid termite infestation by being mounted in metal stirrups set into individual concrete foundations.

Galvanised steel frames used in conjunction with a timber floor can be clad in timber. This combination of steel and timber is probably the most durable and cost effective combination.

As timber used for joinery tends to expand in long periods of wet weather, it is preferable to use aluminium for items such as window frames. Plantation timbers such as Cypress Pine are durable, naturally resistant to termite infestation and therefore require less maintenance.

3.6 LIVING WITH NATIVE FLORA AND FAUNA

There are many new factors to consider when you live in the Daintree not least are the native plants and animals, many of which are rare or threatened and only occur in this region.

DOMESTIC ANIMALS

For many people, pets such as dogs and cats are family companions and provide safety and security. However, if you can live without pets, then ideally this is your best option. Animals that are not native to tropical rainforests require a significant amount of maintenance and care. Many animals will regularly pick up ticks, parasites, worms, fleas and other tropical nasties.

If you have an animal when you move to this area then you should make sure that you are responsible for your pet at all times, as domestic animals are responsible for the decline of many native animals.

Cats are a major problem. A survey has revealed that feral cats are responsible for nearly 1200 native bird kills per cat per year and domestic cats are responsible for 200-300 native bird kills per cat per year. It is essential that cats are confined at night, as many native animals are active then.

If you have a dog it must be registered. Try not to leave your dog unattended to wander into forested areas. If you have to leave it at home, ensure the animal is confined, perhaps in a small fenced area or enclosure. Dogs should also be tied up or kept in an enclosure at night. There is a limit of two dogs for residential rural properties. You may also find it appropriate to de-sex your pet. De-sexed pets are generally easier to manage and cheaper to register.

PIG CONTROL

Pigs were introduced to North Queensland nearly 200 years ago and, having no natural predators, rapidly increased in numbers. As a conservation issue pigs are near the top of the problem list. They cause erosion, spread disease and compete with native animals for food.

Pigs can be a problem for residents as they are attracted to rubbish bins and newly disturbed ground. Always store rubbish, especially food scraps, in a tidy and contained or sealed fashion.

Pigs carry one of the many strains of leptospirosis, a disease that can cause serious illness. Be sure to wear shoes and protect any cuts or open wounds when walking in areas disturbed by pigs.

Caution should be taken with pigs, as large males can reach 200Kg. If you have a pig problem on your property then contact the Feral Pig Control Coordinator or the Douglas Shire Council Environmental Officer.

FENCES

If you have a small cleared area around your dwelling, have pets and would like to have a garden with a lawn and/or introduced plants, then a small fence around your dwelling is an easy way to manage your site.

Care must be taken that the fence does not disturb or cause harm to the native wildlife, such as inhibiting the movement of Cassowaries or snagging birds or bats. A small fenced area will also keep pigs away from the house and garden.

RAINFOREST HEALTH CARE

Due to the heat and humidity in a rainforest, cuts and scratches can easily become infected with bacteria and tropical nasties. Cuts and scratches, however insignificant they may seem at the time, should be taken seriously as they can become ulcerated. Seek medical advice and keep wounds clean and dry. Peroxide and iodine are essential items in a home.

The Community Health Nurse is based at the Diwan Community Centre on Tea Tree Road, Cow Bay. She is available between 10am and 12 noon Monday to Friday.

NATIVE ANIMALS

All native animals are protected under law.

1. Bats/Flying Foxes.

Small insectivorous bats (the size of an open hand) will swoop through open houses at night, hunting insects and hanging on rough surfaces such as rafters, to groom and rest. Flying foxes will frequent fruiting trees at night, often in large groups, squabbling noisily amongst themselves. By day they roost in colonies but seldom in a food tree.

2. Bandicoots

These marsupials (with a backward-facing pouch) breed frequently and are probably the most commonly seen of the native rainforest animals. They will dig up gardens and up-turn pot plants looking for insects and worms. They are also quite partial to pet food and will venture readily into open homes. Bandicoots are very placid creatures and easily become tame if fed and often become prey to domestic animals.

They are host to ticks and are also one of the carriers of Leptospirosis, so avoid contact with their urine, especially with open cuts or wounds. Small fences around vegetable patches (20-30cm high) and raised pot plants are practical deterrents for reducing damage to gardens. Domestic animals should be locked up at night while Bandicoots are foraging.

3. Native rodents

White-tailed Rats (the size of a bandicoot) can be seen at night running along vines and branches in the rainforest canopy.

They are also capable of chewing through coconut shells and will easily chew through PVC water line. They are attracted to the smell of body oils left on items handled by humans - spraying items after handling with insect repellent such as citronella is a good deterrent. The use of hair spray on electrical and telephone wire also acts as a good deterrent.

Melomys, which are mice-sized native rodents, are attracted to food scraps and dirty clothes left in open homes. They will chew items such as clothing and electrical wiring, and make nests in warm dry places such as bookshelves or clothes cupboards if allowed inside houses.

Another carrier of Leptospirosis, they will also attract snakes inside your house and the best deterrent is to keep houses rodent-proof and free of food scraps.

Water rats usually stay close to the creeks and rivers which are their homes, but will stray into open homes if attracted by food scraps such as meat or pet food.

4. Snakes

Snakes can be attracted to warm dry places, such as open houses, especially in search of prey such as rodents or kittens/cats.

Statistics show that 60% of snake-bite victims are bitten while trying to kill the snake and it is strongly recommended not to attempt to kill snakes or encourage domestic animals to kill snakes. If you are unable to encourage the snake to leave of its own accord, contact the National Park Ranger for identification and/or removal.

Care should be taken while driving at night as snakes such as pythons (which are non venomous) often become traffic victims as they warm themselves on road surfaces.

5. Wildlife Rescue

If you come across an injured native animal, the local registered Queensland Wildlife Rescue branch is situated on Maple Road, Cow Bay. They have the experience and the facilities, together with a network of carers to assist the rehabilitation of injured wildlife.

Call Alex or Guy on (07) 4098 9079.

NATIVE PLANTS

Council will require that to maintain the environmental integrity of the region any replanting must use as many native plants as possible.

Advice on plantings can be obtained from the DSC Environmental Officer, or the DSC nursery in Mossman (07 4098 2619), and from other organisations such as Greening Australia (Cairns).

Re vegetation can help you fulfil a number of goals. It can provide shading, a visual and noise buffer, contain and stop erosion or just attract wildlife closer to your dwelling.

and hanging on rough surfaces such as rafters, to groom and rest. Flying foxes will frequent fruiting trees at night, often in large groups, squabbling noisily amongst themselves. By day they roost in colonies but seldom in a food tree.

If you have large areas of cleared land or even patches of rainforest, you can 'kick start the natural forest regeneration process by creating what are termed as 'vegetation corridors'.

By starting your plantings close to existing vegetation and creating links to other areas of existing vegetation, you can encourage the movement of native animals through your plantings. Animal droppings often contain seeds from other plant species and will aid the re vegetation process.

By spacing your plants about 2 -3 metres apart in a random fashion, you can create a more natural forest appearance. Seedlings will have to be managed for the first year including watering and weed control. An ideal time to plant is just before the Wet Season.

If you have a wastewater irrigation system, then re vegetation is an ideal way to disperse treated waters but remember to use drip feeders.

To control weeds in cleared areas or around new plantings use a suitable herbicide which should be sprayed close to the ground, on a still day and not prior to rain. Remember to wear protective clothing and seek advice from the Environmental Officer if you are unsure. Weeds can be controlled with the use of mulch which blocks out light and inhibits weed growth.

If you wish to grow non-native plants, try to keep them close to the house in a more manageable conventional garden area. Non-native plants have the potential for spreading into the surrounding rainforest to become a weed (eg Singapore Daisy, Dumb Cane, Bamboo etc). If you are unsure of the weed potential of certain exotics, ask the DSC Environmental Officer.

A lawn area is desirable around the house but try to keep the size of the lawns to a minimum. Lawn areas need to be cut and watered in the drier months and require more maintenance than forested areas.

- **DSC Nursery:** For DSC ratepayers, the Council will supply a limited amount of local plants for free. They can be picked up from the DSC Nursery in Alchera Drive, Mossman on Wednesdays between 2.30 and 3.30PM. Otherwise, there are a range of local growers north and south of the Daintree River who stock a wide range of appropriate local rainforest species.
- **Greening Australia:** Greening Australia provides a number of services and advice. They can, on request, prepare a revegetation plan for your block. Full botanical surveys of your block are also available from this organisation, and can be arranged through the Council's Environmental Officer.
- **Wet Tropics Tree Planting Scheme:** The WTTTPS is administered through the DSC, with a permanent crew active throughout the Shire. It is possible to obtain government assistance through this scheme for medium to large scale revegetation projects. This is more suited to landowners who have large areas of cleared land. The technical officer for this scheme can assist you in drafting a proposal for revegetation which will be assessed before funding can be granted. This process may take up to 12 months. The technical officer can be contacted on IT (07) 4098 2619.

- **Daintree Cassowary Care Group:** The Daintree Cassowary Care Group is currently growing local native species of trees suitable for re-vegetation purposes. The group are keen to assist landholders interested in revegetating previously degraded land with an aim of increasing the food availability for the resident Cassowary population.

The group can be contacted through the Daintree Rainforest Environmental Centre at Cow Bay (07 4098 9171).

LAND MANAGEMENT AGREEMENTS

The value of a national park for nature conservation depends markedly on how well the adjoining lands are managed. Protecting vegetation and natural wildlife corridors is essential as wildlife knows no boundaries.

Two voluntary programs are available to landowners who are interested in protecting the biodiversity values of their property in the longer term.

Nature Refuges

The Queensland Parks and Wildlife Service allows landholders to have some or all of their land declared 'nature refuge'. A conservation agreement between the Minister and the landholder outlines those activities that can occur on the nature refuge. Ownership remains with the landholders.

A conservation agreement can be for a certain length of time or can be permanent and registered on the land title. Nature conservation and future generations will benefit most if agreements are added permanently to land titles.

Refuge signs will be provided for the property boundary or gate, and the Department may provide resources to help landowners to manage and protect their natural areas. Contact the Department on (07)40914262.

Conservation Management Agreements (CMA).

A CMA is a negotiated agreement between the Wet Tropics Management Authority and a landholder. Under a CMA the landholder agrees to achieve specific land management objectives in exchange for WTMA resources and assistance.

Depending on the type of CMA, any management condition that you have negotiated with the WTMA can be upheld after you have sold your block, should you so desire. Contact WTMA on C (07)4052 0546.

Aboriginal Cultural Heritage Sites

Cultural heritage sites are those places which contain physical evidence of past human activity, or have importance in history or traditional mythology and religion.

If you would like to know more about the relationship between Aboriginal people and your land, a Cultural Heritage Assessment may be for you. Place your request with the DSC Environmental Officer who will coordinate a visit with the Kuku Yalanji.

A small team of people will come to your property to do the assessment. The team comprises elders and community rangers from the Kuku Yalanji tribe. They will meet you at your property and talk to you about how the assessment is done, and you are invited to join them if you wish.

The team traverses your property looking for signs of past Aboriginal activity. The group will write a report describing what was found and its significance to Aboriginal people. The report will also include some recommendations about how the landholder can care for the Aboriginal cultural heritage on his/her property into the future.

An assessment is only done at the property owner's request and is completely voluntary. Over 50 landholders in the Daintree area have requested a Cultural Heritage Survey. Without exception these people have been thrilled to find out about the cultural values of their property and are keen to protect those values.

If significant cultural heritage is found on your property, does this mean that Aboriginal people may make a claim on all or part of your property?

Absolutely not. Private land is not claimable by, Aboriginal people. The Kuku Yalanji people are only interested in the heritage values on your land so that you might recognise their existence and protect them from harm. Your legal rights over your land will not change after the survey - State and Commonwealth legislation exists to protect the rights of landholders.

Aboriginal Archaeological Sites

These are sites which contain material evidence of human activity before non-Aboriginal settlement of the Wet Tropics last century. They include both artefacts and human remains. Evidence of a wide range of Aboriginal activities is distributed throughout the Wet Tropics.

This evidence may be found both on the ground and buried beneath the surface. Finding archaeological sites can be difficult. The vegetation tends to be dense, the ground cover is leaf litter and the terrain Often quite rugged.

Sites may include:

- Rock shelters
- Open campsites
- Scarred and carved trees
- Axe grinding grooves
- Ceremonial grounds
- Walking trails.
- Rock art.
- Places in the natural landscape which are important to the spiritual beliefs, legends and history: of groups, within the community.

Contact the Council's Environmental Officer to arrange a cultural heritage assessment of your property. It is encouraged that this occurs before developing your property so that impacts to heritage sites, where possible, can be avoided.

Community Facilities

I

The community of the Daintree Coast has developed skills and a way of life that is as unique as the region itself. Whether you are a newcomer, wanting to know ferry times or a resident updating community facility details, this section has the sort of information you'll want to stick on your fridge.

4. LOCAL SERVICES INFORMATION AND COMMUNITY CONTACTS

Telephone Area Code: (07)

Ferry

The ferry over the Daintree River operates from 6.00AM to 12.00 Midnight. The after hours number for emergencies is 4098 7536 or 015.630.494. Residents of the Shire are entitled to concession tickets through the Douglas Shire Council enabling them to cross on the ferry for the cost of a card (\$10, valid 12 months), or a book of 50 tickets (\$10). Visitor tickets are also available (40 tickets/person/year) for residents north of the Daintree.

Schools

The Alexandra Bay Primary School near Cow Bay 4098 9137 Fax: 4098 9182) has classes from year 1 - 7, with a one day per week pre-school program. There are currently 72 students enrolled. A daily bus service operates in the district (north of the Alexandra Range).

The nearest High School is in Mossman, with a daily bus service operating along the main road, currently as far as Noah Beach. Phone 4098 1368 Fax 4098 1806.

Rubbish Removal

A transfer station is located at Cow Bay. It is open on Monday and Wednesday between 7.30AM and 3.30PM, and on Friday and Saturday between 7.30 and 11.30AM. As well as general waste disposal, there are facilities for aluminium and glass recycling. For those residents on Forest Creek road, weekly garbage and recycling collections occur.

Adams Waste will remove commercial or domestic rubbish. Phone or Fax 4099 3111.

Medical

A health centre operates north of the Daintree. It is located next to the Diwan Community Centre on Tea Tree Road. The hours are limited to 10AM - 12 NOON Monday-Friday. 4098 9296 or after hours via the Mossman Hospital, Mr 4098 2444.

A baby clinic is held every first and third Wednesday of the month, with home visits by child health nurses and community health nurses available.

Police

The nearest police station is in Mossman 07 40981200.

Rural Fire Service

An active rural fire brigade is located at Cape Kimberley. State Emergency Services (S.E.S.): There are also State Emergency Service facilities located at Diwan and Forest Creek Road.

Cyclones

The region is prone to cyclonic activity from early December to April during the wet season. It is recommended to take the necessary precautions and to keep in contact with the Douglas Shire Council for updates on emergency procedures and proposed evacuation points.

Mail Service

A twice weekly mail service operates on Tuesdays and Fridays from Mossman Post Office, 12 4098 1147. Several local shops and tourist facilities provide mail distribution points.

Government

The area north of the Daintree River is in the Douglas Shire, Division Three (Local Government), Cook Electorate (State Government) and the Leichhardt Electorate (Federal Government).

Sport

The Alexandra Bay Sporting Club operates fortnightly cricket games from April to November, as well as other occasional sporting events at the Diwan Reserve. Tennis facilities can be accessed at the Primary School. Childrens playgrounds are available at the Diwan Reserve, Tea Tree Road and at the Forest Creek Road SES shed.

Boat Ramps

The only boat ramp is adjacent to the Daintree River Ferry.

Shopping

The nearest supermarket is in Mossman. There are a number of small shops north of the Daintree River which supply basic requirements.

Fuel and Gas

There are three fuel outlets, Cow Bay Service Station, Rainforest Camp. Gas is supplied at several outlets.

Library

A mobile Library visits Forest Creek Road and Alexandra Bay School fortnightly. This is based at the Douglas Shire Library in Mossman, 07 4098 2594.

Day Care

There is a child care centre at Cow Bay, (07) 4098 9144.

Bus Services

Coral Coaches provides a twice daily service from Cape Tribulation to Mossman (leaves 7AM and 1PM from PKs), connecting to Port Douglas and Cairns. There is also a seasonal bus service through to Cooktown. (07) 4098 2600.

Newspapers

The Cairns Post and southern newspapers can be bought daily from local outlets. There is also a weekly local paper published by the Port Douglas and Mossman Gazette (07) 4098 1486.

C.I.L.C. AND C.I.L.G.

The Community Information Liaison Committee (CILC) was formed in May 1995 to act as an advisory group for residential communities living in the area between the Daintree River and Cape Tribulation.

CILC was established as a result of the recommendations of the Daintree Rescue Program Community Information Strategy.

The terms of reference developed by CILC are :

- facilitate two-way flow of information between the community/landholders and the DPCG, tourism industry, DSC and other land managers or stakeholders.
- accurately and in an unbiased manner pass on community concerns and opinions on particular issues.
- endeavour to ensure implementation of all aspects of the Community Information Strategy Action Plan. In particular those matters directly identified as CILC responsibility.

- function by consensus rather than formal votes on the issues.
- have a representative/s attend all DPCG meetings and provide regular input to these meetings.
- provide regular feedback to the community and landholders via community organisations.
- endeavour to provide every current and potential landholder with the best practical advice and assistance to help them adopt the best and most cost effective management practices on their land and to develop their residence in a manner sympathetic to the area while in keeping with the individual's, lifestyle requirements.

As a result of a public meeting in February 1999, C.I.L.C. was made a more informal community forum called the Community Information and Liaison Group or C. 1. L. G.

CILG meetings are held on the second Thursday of each month at the Diwan Community Centre. Minutes of the meetings are displayed on public noticeboards (eg ferry, rainforest camp).

GLOSSARY OF ABBREVIATIONS

CILC - Community Information & Liaison Committee.

CILG - Community Information & Liaison Group

DCP3 - Development Control Plan 3

DNR - Department of Natural Resources

DPCG - Daintree Planning and Coordination Group

DSC - Douglas Shire Council

EIS - Environmental Impact Statement

EPA - Environmental Protection Agency

FNQEB - Far North QLD Electricity Board

QPWS - Queensland Parks and Wildlife Service

WTMA - Wet Tropics Management Authority