

Thinking about developing your land?

Whether your project is clearing land, building a single room home or a multi room accommodation, there are impacts that can negatively impact our environment, our neighbours, ourselves and public infrastructure and the economy.

It is true that a single small development does not have a large impact but if many small developments do not follow best practices or the law, they will together produce a large negative impact. Much of the environmental degradation today is due to the cumulative impacts caused by development. We now know how we can prevent or minimize impacts from development by better planning of our projects and how we live.

This booklet is intended to inform developers small and large, on the legally required processes involved in developing land, about installing utility services and to encourage best practices that protect ourselves and the environment.

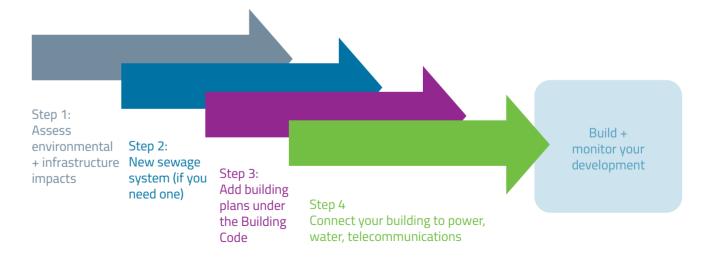
Section 1: Survey Stage	4
Section 2: The Permitting Process	5
Section 3: Utility Connections	14
Section 4: Best Practices	22

Survey Stage



The Permitting Process

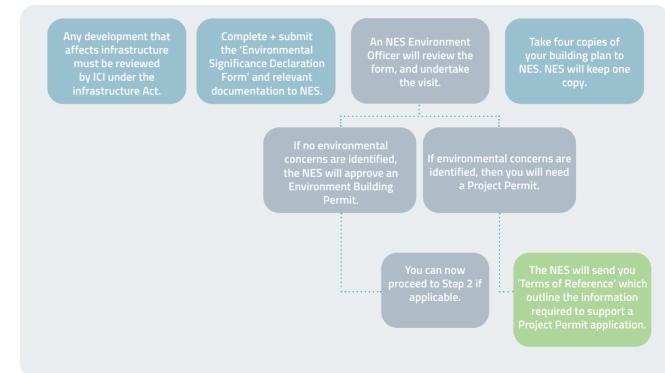
Check if you need formal approval for buildings or other development before you start work on your land. There are three Government organisations involved in the development process: the National Environment Service, Ministry of Health and Infrastructure Cook Islands. You will also need to contact utility providers for connections to power, water and telecommunications. This section provides an outline on the permitting process and the requirements at each step.





National Environment Service (NES) | Permits

Check if your proposal will have an impact.



If your development includes the following activities, you are likely to need a Project Permit from the National Environment Service.

- Excavations on sloping land
- Development in a wetland
- Construction near the coast or a stream

National Environment Service contact details

Phone: 21256

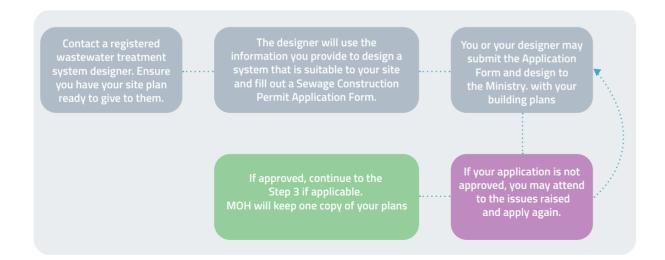
Website: www.environment.gov.ck

Next Step: Sewage Construction Permit



Ministry of Health (MOH) | Sewage Construction Permit

It is important to ensure your wastewater treatment system is designed, installed and maintained by qualified and experienced servicemen. Wastewater systems protect our health and the health of our water, underground and in the lagoon. The Ministry of Health are the regulator for wastewater treatment systems and have a register of designers, installers and systems that are approved for work and use in the Cook Islands.



Tips





Reusing your treated wastewater
- Talk to your drainlayer/plumber
for advice if you would like to
circulate your land disposal pipes
for ornamental plants. Note
that for health reasons, treated
wastewater should not be applied
to root crops and vegetables.

Ministry of Health contact details

Phone: 29110

Website: www.health.gov.ck/clientsconsumers/

sewage-and-sanitation/

Next Step: Building Permit



Infrastructure Cook Islands (ICI) | Building Permit

If you are constructing a building or a structure, you must get a building permit from Infrastructure Cook Islands prior construction.

Take two sets of plans to the building Controller at ICI.

The Building Controller will review the plans, and undertake a site visit.

The Building Controller will ssue a building permit if the application conforms with the building code.

ICI will keep one copy of your building plan. The last copy of the plan will have stamps from all the governmen organisations and a permit from eacl

and development ermit process is omplete. You can now nove to Step 4

Tips







Infrastructure Cook Islands contact details

Phone: 20321

Website: www.ici.gov.ck/regulatory



Water Connection

- 1. Contact To Tatou Vai for an application form
- Provide the location for your water connection (Oire, Tapere, Section number),
 and the type of connection requested (e.g. domestic
- 2. To Tatou Vai will inform you of specific requirements
- 3. Next you will need to:
- Confirm payment for your new water connection
- Purchase materials from suppliers
- Arrange a contractor for your trenching
- Check with Infrastructure Cook Islands whether you need a Road Excavation Permit

Note: Contact a plumber for your indoor plumbing

Tips

Harvest rainwater









Wash vegetables in a bowl of water

To Tatou Vai contact details

Phone: 24479

Website: http://totatouvai.gov.ck

Power Connection

- 1. Contact an electrician
- 2. Your electrician will prepare your electrical plan with you
- 3. Your electrician will apply for a permit application at ICI Regulatory Division, Electrical Inspectorate.
- 4. If approved, your electrician will be issued a permit and is now permitted to begin installing wiring in your home or at your property.
- 5. The Electrical Inspector will make inspections of your electricians work. When all is complete and compliant, the Inspector will sign off on the project and inform Te Aponga Uira that your property is approved to be supplied with electricity.



Telecommunications connection

Phone & Broadband Connections

- Contact Vodafone and advise requirements including location, new or existing building, and if known, if premises had an existing service previously.
- Site visit will be conducted by Vodafone technicians.
- Upon completion of site visit, requirements on installation of service will be advised to customer.
- Customer to complete application form and select monthly plan for services required.
- Payment of installation fees are required prior to service being installed.
- If a new customer to Vodafone, credit checks will apply.

Business Connections

- Contact Vodafone for requirements for all services.
- Fibre and GPON services available.
- Business solutions designed for your business needs.

Vodafone Cook Islands contact details

Phone: 29680

Website: www.vodafone.co.ck



Prior to development, land was covered in naturally occurring native grasses, vines, shrubs and trees as well as leaf fall from these plants and trees. Low lying areas would have served as flood zones to help cleanse flood waters. This would have formed a healthy, well functioning ecosystem. Plants, trees and leaf fall provide a shield between erosion causing forces, which are rain, flood waters and to a lesser extent, wind. Without this vegetation cover, soil is at increased risk of being eroded and the marine environment is at risk of being contaminated with sediments and nutrients. An added pressure on the marine environment is the loss of low lying areas through in-filling.

Soil loses its nutrients when eroded. Topsoil (the top layer) is rich in microorganisms and organic matter and is where most of the Earths biological soil activity occurs. You might have noticed how it takes much longer for grass to grow on recently scraped back areas. This is why in some countries topsoil removal is

done very carefully and placed in a separate pile to be be placed back when excavations are complete.

When sediments and nutrients get washed into fresh and salt water environments, they degrade water quality. This action is known as runoff. The health of the ecosystems for water based plants and animals is reduced. Plants, corals and animals will die or move away if they can and something else may replace them such as algae. This is a reaction to a change. Change in the environment has flow on effects that impact on other living things, including humans and their economies.

Everyday practices also contribute to how healthy our environment and our living spaces are. Practices like how we treat our rubbish, what products we use at home and even how we landscape our yards. This section provides best practice tips that help us be more sustainable in our developments and every day living.

Beneficial planting

To combat erosion and runoff, simply keeping or planting lots of shrubs and trees on your property and on stream and beach banks goes a long way to reducing environmental degradation and helping managing flooding. Vegetation protects soil, supports the soil structure, and facilitates rainwater infiltration through root systems. Soil should never be introduced in areas that are sandy as if it were to be washed into the lagoon, it would create problems. So always consider planting according to your soil type.

Our native animals rely on food and shelter from our native trees so it is important that we make native tree and shrub planting part of our landscaping. We can either leave them in place or if they are removed, replant again.

An invasive plant specie is an introduced one that out-competes native species by growing faster and bigger, blocking out sunlight and space from native trees. Overtime, native trees die out and food sources for native animals are reduced. Know what invasive plants look like and avoid planting them on purpose and eradicate them when they appear. Contact Ministry of Agriculture and Natural Heritage Cook Islands for more information



Rainwater harvesting and infiltration

With the onset of climate change, we have to manage a larger volume of rainfall than we have had to in the past. A simple way to control the effects of heavy rainfall is to capture it and planting lots of trees to enable natural infiltration.

Install a rainwater tank and guttering to capture rainwater off your roof for re-use. Consider installing a device to allow you to switch to mains water supply during low rainfall periods. Only fill from mains to one third of the tank to allow space for rainwater capture. Talk to your plumber for options.

You can manage rainfall that falls on your section by installing engineered solutions and/or natural solutions. Talk to a drainlayer for options and do some research online. You can make your own natural solution like a rain garden to manage rainfall on your property so that it does not affect your property or others downhill.



Passive cooling

Take advantage of ways to practically cool your homes at the design stage. Orientate your home to the prevailing wind direction at your section. Blocking sunlight from making contact with your home helps passively cool homes through keeping large trees on your section and having long roof eaves. Insulation in ceilings and walls helps control temperatures in your home, keeping your home cooler in summer. Insulation is readily available on Rarotonga.

Future proofing

Over time development often increases and the changing climate is also something to think about and 'future proof' for. The changing climate is also something to think about and 'future proof' for.

Consider your buildings proximity to roads. There could be a road widening in the future which could inflict noise into your home. You might like to contribute to public goods such as footpaths, cycle lanes, drainage systems, on street parking or a bus stop in the future.

If your section is on flat land, by a stream or in a low lying area it is a good idea to build your homes floor level well above ground level in case of flooding. Seek advice from local engineers.

 29

Daily Living

Laundry Detergents

Wastewater from septic tanks leaking into groundwater and into the lagoons send nutrients from laundry detergents with it. Choose no phosphate containing laundry detergents for your laundry and help reduce nutrient contamination. These options are widely available and usually have "NP" labelled on the packaging.

Sorting of Household Rubbish

The best way to manage rubbish is to ...

- Clean and separate rubbish into glass, aluminium and tin cans, and recyclable plastics.
- Items that contain electrical components and hazardous substances should be kept separate and taken to the correct facility

- for handling.
- Food scraps should be fed to animals or composted.
- Put rubbish that is not recyclable, not hazardous, and not food into a seprate bin.
- Never burn or bury man-made rubbish.

Visit http://www.ici.gov.ck/recycling for more information.





Checklist

Everything you need to start your project

Detail	New building on an undeveloped section	Building on a developed section	Excavation, vegetation clearance only
NES Environmental Significance Declaration Form	✓	✓	✓
4x copies of houseplan	✓	✓	
1x wastewater treatment system design	✓	✓	

