

Exploration activities

taking care of what's there



OceanaGold is conducting exploration activities on the Coromandel Peninsula. The company is targeting high value deposits capable of being mined by underground methods. Some of these activities are on Department of Conservation (DOC) land. In practical terms this means that if a mineable deposit was located it could be accessed from outside Conservation land with only vent shafts visible on the surface.

As with any human activity in the bush, our exploration programmes have the potential to cause adverse effects on native flora and fauna. This could include loss of habitat, displacement of fauna, or unintended mortality while clearing vegetation or carrying out exploration activities.

We make every effort to avoid, minimise, restore or offset any potential effects. Our activities at Wharekirauponga are a good example of what we do. Before we were allowed to carry out exploration in the area we had to obtain approval from DOC which manages the area on behalf of all New Zealanders. This permission was granted in the form of Access Arrangement (AA) which sets out our operating requirements, including a Kauri Dieback Management Plan and a Wildlife Act Authority.

We minimise any potential effects by carrying out detailed site ecological surveys that, if they satisfy the conditions of the AA for operational use, are used to tailor on-site management. These surveys focus on mapping key flora and fauna species that are known to occur within indigenous forests on the Coromandel. The operational areas must be no larger than 150 square metres, that's a bit over one third of a basketball court. All drilling and other equipment is installed by helicopter to further limit our impact.

Over the past 18 months a series of ecological surveys has disqualified at least 40 potential sites due to Archeys frog populations, One paua slug, and a few native orchids were also found. No Hochstetter frogs, lizards, bats or bat roosts, or king ferns have been located.

These independent surveys have fully documented the flora and fauna of every site. Copies of these are submitted to DOC.

The AA provides for up to ten sites of which only two are currently being drilled from. Both of these sites that had already been modified as a result of previously authorised exploration drilling. These are located in secondary regenerating indigenous forest and scrub.



Top: A typical area selected for a wooden decked drilling platform which is then surveyed by independent consultants.

Above: Seen through a helicopter window, a drill rig operating on a wooden platform in the bush.

The following are examples of the survey requirements for specific species.

'Bat surveys are to be carried out to assess the presence of bats and as a measure of bat activity in the vicinity of the proposed drill sites, in particular to assess whether the site contains roost trees. These are conducted in line with internationally accepted guidelines. Bats will be surveyed using automatic bat detectors as part of the baseline fauna surveys. These will be in place for a minimum of two weeks when forecast weather is expected to be fine, with relatively warm

'Our exploration activities are designed to avoid, minimise, restore or offset potential effects. We minimise these effects by carrying out detailed ecological surveys and tailoring on site management to survey findings.'

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'All potential bat roost trees will be marked with biodegradable flagging tape.

Where possible OGNZL will avoid locating drill sites in close proximity to potential bat foraging routes (i.e., is along river channels, access tracks, forest breaks) as a means of minimising the likelihood of encountering bats.

At least three weeks prior to clearing areas for drill sites, pump sites or camps, a full ecological survey is conducted by independent specialists qualified in herpetology (frogs and lizards), botany (flora) and chiropterology (bats) and approved by the DOC. These surveys are conducted over a 20m x 20m plot where it is proposed to place the 150 square metre site. These surveys are repeated at least three times during climatic conditions conducive to native frog and lizard activity. The purpose of each survey is to provide:

- *a general description of the vegetation present, including all species present,*
- *the number, size (height and diameter at breast height) and estimated age of mature canopy and emergent trees, and*
- *confirmation of the presence or absence (as far as possible) of fauna (native frogs, bats, lizards, and threatened invertebrates) and significant flora.*
- *a determination if the site is suitable for its proposed use.'*



Above: An underground mine on Conservation land could be accessed from outside the area and could require only a vent shaft showing on the surface in the bush.

If the survey locates five or more at risk or threatened frog or lizard species or one Coromandel Striped Gecko the site cannot be used. There may be more frogs or lizards present, but the survey stops once the maximum number is reached and the site is discounted.

If these surveys show that four or less native frogs are found on the plot, the frog locations are marked and recorded with biodegradable flagging tape and GPS. The site may be used as long as a six metre buffer zone is possible with each frog location while also ensuring that the buffer connects with habitat outside the plot.

If we are able to fit a site within the remaining area we proceed by first installing a sheer polythene fence to prevent frogs entering the site and then clearing the site to set up. If not, we look at alternative sites and then go through the same survey process again. At this point a frog fence is erected to prevent frogs entering the surveyed area.



Above: A frog fence at a water pumping station. These fences are constructed from sheer polythene and remain in place until the drill site is rehabilitated.

A suitably qualified herpetologist is required to be onsite immediately prior to and during any vegetation clearance. If any previously undetected native frogs are found during survey immediately prior to, or during vegetation clearance then they will be moved to suitable habitat as assessed by the onsite herpetologist. The release site(s) must be at least 100 metres away from the drill. To date only one frog has been moved during our operations at Wharekirauponga.



Above: All staff entering or leaving the bush disinfect their boots and their equipment to combat the spread of Kauri Dieback.

Our staff also take all practical steps to prevent the introduction or spread of Kauri Dieback. Staff disinfect boots and equipment every time they enter or leave bush areas. This also happens if staff are flying in by helicopter. In addition we have set up boot disinfectant stations at strategic places near where we are working so if we are walking from one place to another we can wash our footwear.

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