QUEENSTOWN LAKES DISTRICT COUNCIL

Scuttlebutt

THE QUEENSTOWN LAKES DISTRICT COUNCIL NEWSLETTER // **MAY 2016** // **ISSUE 114**

SHOULD CORONET FOREST BE HARVESTED EARLY?

WILDING SEED SOURCE

QLDC IS CONSULTING ON THIS ISSUE NOW

Please share your views before 27 May by going online to www.qldc.govt.nz and following the Coronet Forest link off the homepage.

Coronet Forest is the 173ha block of Douglas fir trees growing on the lower slopes of Coronet Peak, close to Arrowtown. It was planted between 1984 and 1996 and has been managed with a view to providing a commercial return.

The forest is owned jointly by QLDC and our neighbours, Central Otago District Council. QLDC has a 75 percent stake and CODC has 25 percent.

QLDC owns the land that the trees are planted on. It is designated for the primary purpose of planting, tending, managing and harvesting trees for timber production.

If the forest were left to grow to maturity, the trees would be harvested between 2029 and 2041, when they were 45 years old. That remains an option, but the Council is also considering whether it would be advisable to harvest the trees earlier.

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PLANTING NATIVE TREES

Whatever the Council decides, Coronet Forest will be harvested sooner or later and the intention is to replant the lower slopes of Coronet Peak in species that won't spread as wildings. This isn't just common sense – it's a requirement under our District Plan.

Income from selling the timber will be used to help pay for the replanting.

About 80 percent of the forest is classified as "non-Kyoto forest" under the Emissions Trading Scheme because it was planted before 1990. As long as the area is re-established in trees, the forest won't be responsible for any loss of carbon.

There are no firm plans for yet but the Wakatipu Reforestation Trust has advised that land could be replanted in a mix of beech and exotic species that would look similar to the hillsides above Arrowtown and be spectacular in the autumn.

As a rule of thumb, replanting would take place about three years after harvest so that any Douglas fir seeds left in the ground would germinate and be controlled first.

WHAT'S WRONG WITH WILDINGS?

So what's the problem with wilding conifers, you may be wondering? Isn't any tree a good tree?

Douglas fir is a valuable source of timber. It grows quickly and is widely used by the building industry. So far so good.

It's also an aggressive tree that easily colonises ungrazed tussock land, which is why it's become a pest species in the Wakatipu.

Wildings spread in the direction of the prevailing wind and the land behind Coronet Forest is particularly susceptible to wilding invasion.

The effects of Coronet Forest are very visible already. As the trees get bigger and produce more seeds, their impact on the spread of wilding trees gets worse. Vast areas of native tussock grassland and beech forest are being invaded and as the wildings become the dominant species, they destroy the native ecosystem.

Although QLDC is already an active partner in wilding control, Otago Regional Council is taking a more forceful stance against wilding conifers and it's likely that QLDC will be required to do even more to mitigate the effects of wildings spreading from Coronet Forest.

It's foreseeable that the cost of wilding control would be far greater than the extra income we could gain by waiting until Coronet Forest was fully mature.

TIMELINE

2040

2030

2029 – 2041:
Trees reach maturity if not harvested earlier

2020

2017 – 2018:
Possible early harvest, lasting 18 months

2015:
QLDC begins investigations into the costs and benefits of early harvest

2010

2008:
QLDC takes over management of the forest

2000

2000:
QLDC begins funding wilding tree control

1990

1984 – 1987:
Coronet Forest planted

1980

QUEENSTOWN LAKES DISTRICT COUNCIL

SHOULD CORONET FOREST BE HARVESTED EARLY?

Here are the reasons why QLDC is considering early harvest:

WILDINGS

The Douglas fir trees in the Coronet Forest are a significant seed source for the spread of wilding conifers across the high country in our district. The Wakatipu Wilding Conifer Control Group spent $1.2 million on wilding control last year alone.

QLDC has been helping fund wilding control since 2000. Is it sensible for the Council to be helping pay for the work done by the Wakatipu Wilding Conifer Control Group while at the same time contributing to the wilding problem by growing Douglas fir?

The bigger the trees get, the more seeds they will produce. We estimate that if Coronet Forest is left to grow to maturity, the cost of wilding control related to this seed source will be $2.9 million between now and harvest.

COST VERSUS BENEFIT

We have crunched the numbers for both an early harvest and letting the trees grow to maturity. We used two models – one was based on a "conservative" forecast of income from the timber and the other used an "optimistic" projection.

Both sets of figures factored in wilding control, the costs of harvest, replanting the land and the expected income from selling the timber. Once the seed source is extinguished, the compounding effects of wildings are no longer factored in.

Under the conservative model, the outcome was neutral – ie there was neither an obvious financial benefit nor a disadvantage in harvesting the trees early or leaving them to grow to maturity.

Under the optimistic model, there is a $450,000 advantage in harvesting early.

If the Council opts to harvest Coronet Forest early, the optimistic model projects a nett return of $250,000 after revegetating the area in other species (see sidebar). The conservative model projects that there would be a shortfall of $1.2 million when revegetation costs are included.

Harvesting at maturity, the optimistic model projects a shortfall of $200,000 (including nett returns from the harvest, ongoing wilding control and revegetation costs at maturity.) The conservative model projects the same $1.2 million shortfall for the "harvest at maturity" option as for the "early harvest".

VOLATILITY

Investing in forestry is a long-term commitment and carries several risks, including the possibility of damage from storm and fire.

Wood prices can be volatile and Coronet Forest is located a long way from potential markets.

Until recently, prices for Douglas fir have been on a par with Pinus Radiata. Since March the premium for Douglas fir has increased. Coupled with historically low ocean freight rates and the low exchange rate mean that current Douglas fir prices are considered favourable.

That could change.

THE RULES HAVE CHANGED

When the trees were planted, commercial forestry was a relatively common form of investment for councils. The Local Government Act has been amended so that Council investment in commercial forestry is no long consistent with the purposes of local authorities.

ENVIRONMENTAL CONSIDERATIONS

Early harvest and replanting in non-invasive species would meet the District Plan's objectives for nature conservation and natural landscape values.

Here are the reasons why QLDC is considering letting Coronet Forest grow to maturity:

BIGGER TREES MEAN MORE TIMBER

Allowing the trees to grow to maturity will produce higher volumes of timber, which would provide more income.

In the next 15 years, technology for harvesting trees on steep slopes may improve, which would reduce the cost of felling and retrieving the trees and improve the expected rate of return.

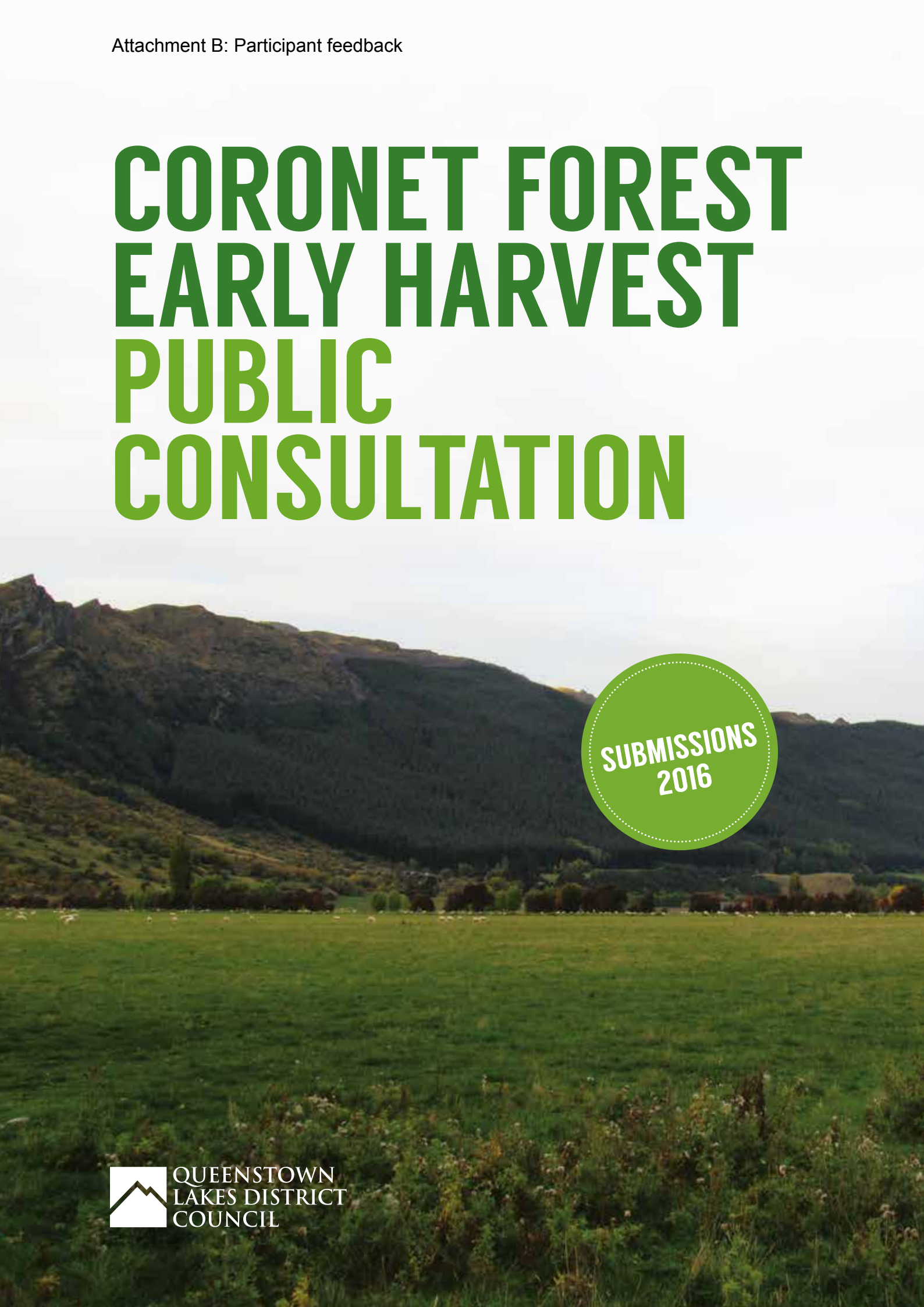
Log prices may also increase.

THE GOOD OIL

QLDC supports the concept of finding beneficial uses for wilding conifers. One of these has been put forward by Wilding & Co, a company producing oil from Douglas fir.

QLDC recognises the potential for a significant commercial gain from these pest trees and is keen to work with businesses as we look for solutions to the wilding conifer issue.

CORONET FOREST EARLY HARVEST PUBLIC CONSULTATION



QUEENSTOWN
LAKES DISTRICT
COUNCIL

Feedback

[submission_type] I am giving feedback as:

Response	Count	
An individual	242 *97.2%*	
An organisation	7 *2.8%*	
	Total: 249	

My thoughts on the proposed early harvest of Coronet Forest are:

Response	Count
	249 responses

The stated pros v cons are obviously slanted towards harvesting early, I'm sure the corrupt council will just grab the money anyway, so why consult us?

No early harvesting. Leave until mature, so as to maximise returns.

I believe the the trees should be kept until their full maturity term. I believe timber prices will continue to increase and cutting a project short like this doesn't make sense. Surely the council who approved the forest had already considered the risk that you are now highlighting again and they were comfortable with that decision.

I totally support the early harvest of Coronet Forest. The work that QLDC does with WWCG should be commended and all efforts should be made to halt the spread of wildings. Any profit gained from leaving the forest to mature will be negated against funding required for wilding control.

I support the area being revegetated in native forest.

The Coronet Forest should be harvested early to remove the wilding seed source, the seed and wilding trees from the forest now cover thousands of hectares on Coronet Peak Station and up towards the Crown Range threatening landscape and biodiversity values. Millions of dollars has been invested in wilding control and continues to be spent removing seed sources around the district. Removing the forest now is a key move in containing and preventing wildings from spreading further into the backcountry.
The forest should be planted with a mixture of natives and exotics.

Harvest now. Critical to reduce wilding pine threat and restore the natural Central Otago landscape. You can analyse things to death but sometimes you just need to do the right thing. The right thing is to redress past

poor decisions. The forest needs to go and an intensive programme put in place to eradicate after harvest seedings.

Yes I believe this should be managed sooner rather than later, wilding pines are only going to take more & more of our natural alpine environment.
Early harvest & then replant in natives.

Harvest ASAP and replant with natives please.

Log it all. Replant. Enjoy the increases amenity value of a coherent landscape.

Cut it down and replant native trees or bushes

Cutting it Down I would think would be much better than killing it chemically.

Harvest now while conditions are favourable and to prevent the worsening of the ongoing wilding conifer nightmare.

It's going to look like shit if you cut it down

We are talking of a considerable loss of revenue with an early harvest . Wilding pines are already a problem that is being controlled . Extra revenue gained by maturing the forest will be better used to eradicate the wilding pines. You should review your original strategy that established the investment in the first place, I believe an early harvest would be a very poor result and disagree with the idea of an early harvest

Having joined in Wilding Pine removal groups a couple of times now (Sawpit Gully / German Hill area) I strongly support the idea of an early harvest to remove the forest as a ready seed source.

While stock were grazing the hills, the wilding pine sprouts were kept under control, but that meant native bushes / trees were also eaten. With stock removed to let the natives grow, the seed source has meant that the pines have become a very costly problem.

Regards,
Gerard Hyland,
[redacted]

Harvest early.
How many tons of poison will NOT be needed to carpet bomb nature into submission to control the spread of Douglas Fir. There are health effects with the poison used, for people AND nature.
It's a big deal to cut down that forest now, the visual and noise effects on my business and property are huge! The Flightpark caters for tens of thousands of tourists per year and having the forest cut down will not help business in the short term, but it would be morally wrong to wait. The poison used definitely does slow the trees down but it kills some species of native vegetation as well. The ongoing control for another 20 years will change the ecosystem for ever.

I lived here 10 years now and I can see the spreading of the pines, especially in and around Arrowtown.
I personally think you should harvest now. But it should be done in stages as a bare hill side will be an eyesore. Especially if it sits tehre for three years. I am not sure if it works in regards to cost and seed spreading.

I am not sure what plant sizes you allowed for revegetation but small plants take a long time. And we really want to look at a nice hill.

In regards to replanting - the autumn colour in Arrowtown is based on Sycamore, larch and rowan. Especially Rowan and Sycamore are weeds as well just not evergreen. So if replanting I think we should go for a native beech forest. This hill is facing south east and will not be so hot so this could be good for the beech trees. The sycamore and rowan will find their way in anyway.

If we tackle this hill how do we handle the pine forest along the Gondola?

The sooner we stop the spread of wilding pines the better

The wisest course of action is to harvest the trees early in order to prevent even more wildings spreading to tussock land. Our mountain landscape and native flora and fauna need to be preserved.
The proposal of the Wakatipu Reforestation Trust for replanting sounds excellent.

Given the uncertainties of financial returns from increased timber in the future, compared with the certainty of costs from the spread of wildings, we should not delay.

I think the forest needs to be removed sooner rather than later.
The last couple of years have seen an explosion of wildings in the sawpit area that can only compound.
It makes little sense to be paying for wilding control and at the same time harbor the major seed source.
Something also needs done with the other time bomb below Coronet Peak Road...

Pine trees aren't native to New Zealand and so if the country can harvest the trees and use it as heating source for local houses, I would be happy to harvest them sooner than later. However the trees are our safety options if things go wrong in the air. Often trees are the ones that safe us from severe injuries or dying. I have never had an accident but I know others that trees mean a lot to them. Perhaps begin at the end (Arrowtown side) first to allow local pilots utilize trees if needed not that happens often but from safety point I would keep them at least above the flight park area.
Thanks.

Best to make a decision based on the real management constraints and economics of the situation rather than ask an uninformed public what they want.

I'm keen to see it gone and replanted with same trees as on the hills above Arrowtown and maybe replant tussocks on the higher slopes.So 2/3rds trees and upper 1/3 tussock

The sooner the pines are removed the sooner the area will regenerate.

A wonderful thought! Yes to early harvest & replanting with Beech & exotics.

Wilding trees need to be eradicated. Harvest early and remove a source.

BTW, the hills above Arrowtown are showing signs of obvious wilding species invasion. Are plans in place to deal with this, soonest?

I think it would be better to harvest the trees early. Financially it seems there is little to choose between harvesting now and at full maturity but I think the spread of seeds over the next 15 years will add substantially to the Wilding Pine problem. Surely it is better to harvest now while prices are good and it will have a beneficial effect than to wait while things may change to become more disadvantageous.
But harvesting now must be on the assurance that the replant will be with natives that will give a similar look to the beautiful Autumn colours of Arrowtown.

The forest should be left to mature by which time the price of timber and uses will be far greater than today. I d o believe there is a Wilding problem but it can be contained with Vidglence the immediate neighbour a foreign owner should be asked to contribute as they have Destocked all their Property the method that kept this problem at Bay.

I think it is a great idea to harvest this forest and the sooner the better. Replanting in trees that would look similar to the hills around Arrowtown would be so good.
I feel other Douglas Fir plantations like the two that have been planted near the Coronet Peak road should also be cut down, it was unfortunate that they were allowed to be planted in the first place.

I support any initiative to harvest this forest early. I have witnessed prolific douglas fir seedling growth on the hillside above Arrowtown in the last 3 - 4 years alongside the Forest. The longer this problems continues the larger the cost there is for wilding tree eradication beyond the current forest area. It is already a problem.

There is an opportunity for the Council to promote leadership for a District Wide problem being tackled through the Trust as well as private owners and run holders such as Coronet Peak Station. It is hard for the Council to take a principled stance on supporting wilding tree eradication on the one hand while contributing towards the problem.

Once the Forest is cleared I also support the re-vegetation of this slope in native plant species that would help to better support indigenous biodiversity. I do not support planting of this area in exotic species to in some way replicate the colourful backdrop to Arrowtown during Autumn, as that is a quality unique to the Village and in this location would not connect or add to this unique feature.

Under this future regime of a planted reserve I would also support development of the land for compatible recreation purposes, including further mountain bike trails.

I appreciate having the opportunity to make comment.

Kind regards

Chris Ferguson

I agree with the early harvest, mainly because of the huge problem with wilding pines.

I would strongly favour cutting down the Coronet pine forest as early as possible.Wilding pines are a terrible pest. Cutting down one of the major seed sources is a cost effective way of stopping the spread.

Waiting to control them until after they have spread - eg by spraying or chopping down - is a very expensive and time consuming exercise. And a battle that is being lost at the moment. They are spreading faster than they can be removed.

Cutting down at source will save future money being spent on spraying etc and do the job much more effectively and comprehensively.

I believe wilding pines are a major blot on our outstandingly beautiful landscape. I welcome the chance of cutting down this forest - it's a great idea!

Remove the Coronet Forest AS SOON AS POSSIBLE.

We live on the west side of Arrowtown there are large amounts of seeds coming from Coronet forest and spreading up the Crown range and Arrow river we help with hand control but this is next to useless in the face of the huge seeding pressure.

Cut them down now. There is already a huge impact of wilding pines in the basin at the top of Sawpit Gully that will only get worse if the forest remains. The tussock grassland ecosystem is more important than any potential (and unpredictable) return on leaving the trees to mature before felling. Get rid of them now!

I strongly agree to milling them as soon as possible. They are a huge source of the wilding pines that are rapidly spreading over the hills behind them. I am involved in the Adopt a Plot on the Ben Lomond track and do not want to see this problem increasing year after year.
Yes it will cause noise and be unattractive for some time but the intention was always to mill them so I think sooner the better

Go ahead harvest ASAP and do it as described. Wilding is a menace and needs dealing with sooner rather than later.

I favour early harvesting and planting of beech and other native species.

Harvest the trees as soon as possible. The hills all around Arrowtown are being covered in Wilding pines, and the forest is a key reason for the spread. Tobins hill is increasingly affected by pines, Big Hill, Sawpit

gully, and the back of Skippers also. The ongoing costs of eradicating the wilding pines, combined with the loss of the local Arrowtown autumn colours means they should be logged and replanted sooner rather than later.

Coronet Forest should be harvested early to reduce the cost and detrimental effect of wilding pines and also to offer the opportunity of replanting with a more sympathetic variety of species.

I have had 25 years experience in the planting, harvesting, processing and selling of both Radiata Pine and Douglas Fir. Quite frankly it doesn't matter when the Coronet Forest is going to be harvested as the location, the type of terrain and lack of silver culture means that it will be totally uneconomical at any age. My concern is the damage to the environment and landscape so on that basis they all should go as soon as possible.

I totally agree on the early harvest of Coronet forest as conifers have many negative environmental impacts.

A lot of money within the community goes into controlling Wilding pines, if we don't do something now they will get out of control. Seems like a waste of money and volunteer hours trying to control these trees in high country areas when prevailing winds carry the seeds into these areas anyway.

It would be smart to bring forward the harvest so that district policies and plans can be put in place to make sure these go onto the pest register. Therefore, people who have pines on their land MUST get rid of them. Lets set an national example!

Eye-sores aren't a valid reason for pushing out the harvest.... people need to get a life.

I would like to support the early harvest of Coronet forest.
The potential for destruction of indigenous vegetation is too high to leave the forest in place. The cost of control is also problematic.
By removing the forest early, QLDC is making a bold statement and showing strong leadership in the fight against wildings.

I agree with the proposed early harvest of Coronet Forest for all the reasons why QLDC is considering early harvest.

I wrote a report dated 21/01/1981 to the Town Clerk, Arrowtown Borough. (I still have a copy!!) Owen Marshall retained my services and I inspected the area in the company of Messrs Marshall, Reid & Wilcox.

I'm a Farm Management Consultant and Public Valuer (now aged 71) and was heavily involved with forestry at that time. Clearly the Council wanted to tap into the 50% Gvt subsidy to establish an inland forestry resource that would provide local business opportunities in the future. John Olsen from JE Watson & Co Forestry Dept had prepared a report. The problems with Wildings were known then (Contorta) but spread from Douglas wasn't really considered. Little attention was paid to control until now. I thought it was a poor choice of land-

use at that time, as grazing options (deer?) weren't properly considered.

Whoever is assessing the cost/benefit associated with an early harvest is only guessing, and I believe would have no knowledge of the difficulty to re-establish natives in this area. The cost to constantly release would be major. They grow slowly and would face huge competition from DF seedlings as well as gorse and broom which would most likely emerge. Control of Wildings will be subject to considerable progress in the ensuing years as new methods most likely emerge. An early harvest would produce very low income (too far from any Port for immature stems).

The great weed infested scar an early harvest would give would be an embarrassing sight, and I don't know if the privately owned DF Compartments growing alongside would be included in the early clearance? If not, (which I would suspect) nothing major would be achieved to stop the spread of seeds, if growing DF remained in the area. I am pretty sure (without a guarantee) privately owned stands are in this area. Council will know and will require neighbourly co-operation I would think.

I feel waiting as long as possible to harvest (improved weight, possibly price, certainly technology for both harvest and Wilding control) would be the best move - could be 20 years away until a harvest scar was visible?? More time would be available to establish new species, as the harvest might be spread over 10 years, resulting in much smaller annual areas to be managed. (Success more likley)

Many DF forests in Otago and Southland are now spreading seeds with the prevailing winds, and I am not aware of any other calls for an immature harvest to attempt to prevent those spreads. They can be controlled. I feel it was a great mistake in the fist instance to plant rather than pursue a grazing option, and I strongly feel now that an immature harvest would be another mistake, as the future effects of technology and prices is not properly understood.

The Coronet Forest, was planted by the Arrowtown Borough Council in the 1980's,despite protest at the time--those against were labelled ignorant ''Greenies.'' The spread of wilding conifers was already a problem elsewhere,though this was conveniently overlooked.I would personally consider the earliest possible harvest a ''no-brainer.''
yours sincerely,
Annie Jefferson
PS I would welcome the planting of native trees,but be wary of a mix of native and exotics,as the Lakes District seems to encourage exotics over native species.Natives take longer to grow initially ,but once established seem to grow as fast as exotics.

I am not against this protect but what worries me the wilding pine problem on the Arrowtown Hill that needs urgent attention and money to do it and manually done no spray.
I look out at that hill and at the moment it is a fabulous view and usually is when the colours are not vibrant

but the more these trees grow etc someone will drastically get rid of them.
Please think about this problem before the growing on of the trees on the Coronet Hill.
Think wisely.

Fully support the early harvest and establishment of native plantings.

I think the Coronet Forest should be harvested early.

yes, harvest the forest early and remove source of (some of) the wilding conifers ASAP.
It's excellent that council has recognised the inconsistency - one arm is trying to eradicate them while the other arm is farming them!

I support early harvest of coronet Forest.

Hi Guys,

Good job on thinking of getting rid of these. I am very much against Wilding Pines of all sorts. You guys have thought this through very well and I think that Beech and deciduous trees would look absolutely amazing and be a massive benefit to Queenstown.

Get rid of the pines trees is my vote!!

Kindest Regards

Max Perkins

I feel the trees should be harvested as soon as possible to reduce the ongoing seeding of the country behind it.
Even if future returns may off set the cost of ongoing wilding pine control, the fact that removing the seed source will reduce the number of new trees needing to be controlled and give a real chance of winning the battle with this invasive species.

In summary, get rid of them now.

Cheers, Michael

Harvest early, for all the reasons set out in the report. The problem of wildings is rapidly increasing and and in this case the trees are spreading to the NW of the forest beyond Bush Creek, across to Glencoe Station and on up towards Crown Peak.
I think the full cost of control is probably underestimated, and the longer we wait the worse it will get.

I support early harvesting of this forest and the replanting in 3 years with species that will not invade tussocklands. I have a Forestry Science degree from Canterbury University, worked in mountainland

revegetation research in the 1980s and since have helped with wilding pine days in the Wakatipu.

I support an early harvest.
Reading your report on this in Scuttlebut it would appear that from a financial position this is the right thing to do.
Also the point of possible damage from storm or fire are valid points.
Also harvesting costs will no doubt be higher.
This would remove a large wilding pine seed source.
But the most compelling reason is to change the landscape into one that is suitable for native flora and fauna

I would like the Coronet Forest harvested early.

The spread of seeds are/will increase wilding conifers.

The early harvest will be an excellent example of enacting QLDC's own objectives and policies re the protection of natural landscapes and features values.

Economically, there is no guarantee that wood prices will remain constant.

QLDC should harvest Coronet Forest as soon as practical.
While there are significant environmental and biodiversity benefits from replacing the Douglas Firs with Natives, there is also an economic case.
Any opportunity for a better return by delaying the harvest until they reach maturity is far outweighed by the risk of greatly increased costs for wilding pine removal.
Net: In the interests of restoring some of the natural beauty of the region and containing future possible costs the council must act now.

I am editor of the New Zealand Alpine Garden Society journal and last week began researching a piece for the journal on wilding conifers. Yesterday I drove up to Coronet Peak for the first time to take photos to accompany my article and was horrified at the extent of the forest and the spread of the wildings through the tussock country. All the way home (back to Wanaka via the Kawarau Gorge) I couldn't help but notice conifers, where they hadn't been on my radar before. Some appeared to be relatively newly planted for shelter belts for new homes and lifestyle blocks. If the iconic open tussock country is to survive for future generations, we need to harvest Coronet Forest now. The problem will be beyond control if harvesting is left until the trees are mature in 15 or so years' time.

Please log the forest, as soon as possible, to minimise unacceptable costs of wilding pine control for future generations.
And I think this is the kind of question you don't need to ask. You've done the cost benefit analysis, it couldn't be clearer, just get and do it!

I am a strong supporter of the proposition that the forest area be cleared as soon as possible to extract what value can be gained whilst the market is relatively strong.

There are also good environmental reasons to do so .
I am not a supporter of the visual effects that the forest has subjected the hillside with the dark green intensification that now lacks the natural colours of that area.

Having had experience with the harvest returns from forestry I also am suspicious of the economic returns that come from long term harvest plans which never seem to align to the original projections.

So in other words the sooner that forest has been harvested & the area returned to grassland the better.

This may also reduce the carbon replacement cost which could be payable on harvest.

I give the Council full marks for raising this matter.

I believe that the trees should grow to maturity, hopefully more income for the council and better technology for harvesting.

It is my view that the Council has an obligation to be a "good neighbour" which outweighs any potential future financial gain from this forest. The seedlings are an enormous nuisance for the adjoining properties and I am aware that one of the neighbours to the forest has already had to spend $300,000 to control wilding pines, and despite this the valley around Sawpit Gulley now basically looks like a newly planted forest. By the time the trees are fully mature it seems probable that the neighbour will have spent more on controlling the nuisance resulting from the seedlings spread from the forest than the Council will gain in income from the harvest which is quite inequitable, and the council will at some time end up having to fit the bill for wilding control in the adjacent areas. Better to remove the nuisance now and also ban the planting of future forests of this species.
Thank you for considering this submission.
Michael Fisk

Harvest the trees early ! ! They are classified as wilding ! ! No point mentioning the future consequence if they are left to fully mature ! Just do it !

Harvest early.
Good to see the Council has given this some serious thought.

The future returns from forestry are uncertain. While participation in forestry has been a common activity for local councils for many decades, recent practice has been for councils to focus more on delivering infrastructure with much less participation in long term investment strategies not associated with infrastructure. The on-going cost that the district faces from the wilding conifer problem dictates that the possible future returns be foregone in favour of reducing future cost now.

Lose the trees now and get on top of the environmental threat that they pose.

Thanks

Thanks,

I support the early harvest of the Coronet Forest

Happy to harvest later as plannned

Yes, harvest the trees early. This supports the long term goal of wilding eradication.

Leave trees to maturity for greater return, then plant with natives.

Yes please! Wildings are a complete blight on the Otago landscape. In my view the only good conifer is a dead conifer - please harvest early.

Thanks
Sally

Please harvest early and replant with a non-invasive species. The Wakatipu Wilding Conifer Control Group do a great job so QLDC should still contribute financially towards their efforts.

Having weighed up the options presented by QLDC it seems to me the best course of action is to harvest the forest sooner rather then continue to spend the additional money incurred to control the spread of pines, and then hope to recoop this money later when the forest matures..
If we want to control them, we need to start at the source, cutting all trees that are spreading seeds so that we aren't going around in circles...

Please harvest them early.

Early harvest please.

It's a huge waste of human labour volunteer resource to go up into Skippers every few weeks to remove wilding pines, if there's a pine seed factory just a few meters away.

Long term, Queenstown stands to gain much more with beautiful native forests appealing to high end tourism than it does from a few commercially planted pine trees.

I would like to see the forest harvested now rather than at maturity.

Why:
1) The seed source will be eliminated, helping with the issue of wilding. Not only will this save money in wilding eradication, but also save on volunteer time, extra exposure to sprays required for wilding control and reduce damage to already fragile native ecosystems and species by further wilding.

2) There does not seem to be a considerable cost benefit to harvest when the trees are at maturity, therefore it makes sense to harvest now while prices are good.

Definitely harvest now! Get rid of all pines & replant with natives please!

I think the forest should be harvested early.
It seems to me that the benefits of harvesting early outweigh the possible returns at maturity and the costs of harvesting early do not outweigh the benefits.
To be able to stop the wilding threat from the forest will assist in the grand plan of preserving the local landscape in its natural form.

I love walking in the mountain and am worried about the threat of Douglas fir trees to the landscape. Douglas fir is a non native species. It poses a risk to native flora and fauna and is a fire risk for the Otago region. Seedlings are spreading at a rapid rate and something must be done, sooner rather than later, to control their spread. Harvesting the site on Coronet peak and replacing the area with native species would be an immense benefit to Queenstown and the wider district.

Times have changes and so have attitudes. This is a step in the right direction. I fully support QLDC harvesting the site near Coronet Peak.

Definitely against wilding pines and all for anything that will mitigate the damage they are doing, so I am in favour of harvesting early.
I presume all options for harvesting will be looked at, to ensure a good return for Arrowtown. Some options I can think of are:
Selling the trees upright and someone else harvest them, removal by means other than roads (which would be very expensive on the steep site), e.g. spars, sliding down the hill, helicopter etc.

I would be pleased to see the pines gone as they don't fit in with the landscape around Arrowtown. I would rather that the hill be left bare, like the hills over the back of Arrowtown towards Cardrona, but if planting must be done, then colourful natives would be OK.

Please harvest them as soon as possible to prevent further spread of Wilding Pines

Yes, I think the trees should be harvested earlier. Anything that can be done to minimise the growth of wilding pines in this beautiful area is a good idea.

I think they should be harvested as soon as possible

The outline in Scuttlebutt clearly indicates the preferred option of QLDC; early harvest. However the information disclosed is inadequate for ratepayers to make an informed choice.
In particular are the cost/benefit options

In particular are the cost/benefit options?

1. Under the early harvest option there is a $450K OPTIMISTIC ADVANTAGE
2. Under the OPTIMISTIC MODEL a $250K net return is forecast.
3. Under the CONSERVATIVE MODEL a shortfall of $1.2M is projected.

This is a huge variance; $1.45m, without any explanation.
History rarely produces the OPTIMISTIC result; in any business or local authority projections. So given the gap it is realistic so expect a deficit.
Nowhere is there any commentary on how this deficit will be funded - ratepayers levy??

Whilst most may support early harvest on ecological grounds they may not be so supportive if it is expected to cost up to $1.25M. delaying harvest could mitigate this loss?

Could we see more of the cost benefit options explained for the benefit of those considering the choice? How is the QLDC making their decision - on what criteria? perhaps the QLDC could share their decision making considerations further with their stakeholders.

I support early harvest. Ruining the landscape

Please harvest them now!

Wilding pine control should be undertaken , and keeping a seed source in council ownership is just plane stupid. There is little return likely on this forestry investment.

I have no problem with the harvest of the forest proceeding based on the information provided. I assume all possible avenues of the use of the timber has been explored (local milling and use, wood pellets, firewood, biofuel for boilers, charcoal production, etc). The Council should be mindful of road wear from logging trucks.

If there is any income from the harvest it should be directed to the control of wilding pines and associated species.

The QLDC should consider every aspect of future painting with caution. It is preferable if native trees are planted rather than exotic species.

The trees should be either harvested or sprayed at the earliest opportunity given the damage being caused through seed dispersal on the adjacent high country. Council should be seen to be as being a responsible land owner and their involvement in the plantation is sending out all the wrong messages to all other land owners.
The current situation is nothing short of ludicrous given the amount of money that has been spent and will be spent on wilding control in the Queenstown Lakes District and having the administrating authority as a major

polluter.

I think they should be flattened now.
You guys are doing a great job with the seed and tree control to date and have made considerable and visual progress on this enormous project locally.
You would be favourably seen as upping the standard of control and leading the community by making this difficult decision at considerable cost to yourselves and its interest of the wider community.
This forest is in a high profile area and the action taken here will be noticed by all with great benefit and support to your seeding source cause.
The work done so far in the Skippers and Marlborough Sounds is evidence of progressive peoples work like yours.

Harvest now seems a sensible solution.

Knowing the effects of seeding and its repercussion in terms of cost to contain wilding pines and stop its proliferation it makes sense that an 'earlier' harvest is the most sensible solution.

I think the trees should be harvested early,because their effect as a wind blown seed source is enormous,and is having an effect on NZ landscapes,is changing the look and flora of the country in a negative way,as natives are generally being pushed aside,and therefore,NZ countryside will no longer be unique,and obviously the nature of the monoculture created by the wildings is not beneficial to the flora or fauna of NZ,as it does not create a positive environment or variationally diverse enough to create a food source for the bird life,and the look,although pleasant enough for the people,is not as attractive as a Native Forest interspersed with non self seeding exotics,to give the Autumn Colour desired by the Arrowtown locals,but still enhances the local beauty,thus making it native NZ,and that is MUCH more attractive to tourists than seeing a relatively lifeless European forest------I think all the proposals regarding cost and aesthetics are very sensible and deserve a chance,altho long term,is much better for the future of the town,our children and grandchildren and the countryside and tourist industry in general--------thankyou for this opportunity to be a part of a very valiant effort by many people to control this "pest"-------all the very best in your quest---------Mutt

As Patron of the Wilding Control Group (WCG) I strongly support the early harvest of the Coronet forest.
The WCG greatly appreciate the support we have been given by QLDC to eliminate wildings in the Wakatipu Basin.
The early harvest of this forest will further assist us in our aims, as the harvesting will stop many more seed being produced.
Thank you
eion

I would like to see the early harvest of the Coronet Forest as I am very concerned about the spread of the wilding pines effect on ecosystem, tourism and farming. Having recently spent some time removing pines in New Chums track I was astonished at the foothold they already have in this area. QLDC needs to act quickly to remove the major seed source and should also be proactive in helping fight the wilding pines in the area as the longer they are left the greater the spread and the more difficult the removal

as the longer they are left the greater the spread and the more difficult the removal

I think they should be harvested early to prevent more seed spreading to other areas.
So much voluntary work happens to remove wilding pine. It would be great to get rid of more seed trees, especially so close to Coronet.

This plantation should definitely be harvested as soon as possible. The QLDC and CODC need to lead the way by harvesting these trees now and showing that they are serious about the control of wilding pines. The damage that will be done by the spread of seeds from these trees over their lifetime will cost a huge amount to control. This cost can be saved by immediate removal; and our environment saved from any further damage from these pests.

Early harvest of the forest - indeed as soon as possible. These trees are a vast seed source and already wildings are obvious in the Bush Creek catchment, having blown over the ridge.
Delaying harvesting will add a huge amount to the QLDC contribution to dealing with removing the wilding trees in the future. The cost of dealing with thousands of hectares of wildings will far outweigh the financial return from more mature trees at harvest.
Financial returns for forestry timber have been fickle for years, and there is no reason to assume the price will improve to give a good return in years to come.
The delay also means those indigenous plants smothered by the wildings are lost to our native creatures - lizards species, berry eating birds, insects etc., our biodiversity. It is our biodiversity that makes NZ different to other places!

I am strongly in favour of an early harvest of the forest. Over the last few years I have been mountain biking in the hills out behind Arrowtown and have noticed a significant increase in the number of wilding pines becoming established in the tussock lands along the Bracken Saddle track, the Macetown trail and around the Sawpit Gully trail area. Whilst I cannot say conclusively that these have come from seeds blown from the Coronet Forest, they certainly appear to have given that the forest represents the most significant local source.

If, as the materials say, the is very little difference in the financial outcome of retaining the forest to optimal harvest time and harvesting now, I cannot see any good reason to retain the forest and increase the risk of losing the tussock lands to wilding pine forests. If the amount of seed produced from the forest is only going to increase as the trees get bigger, the cost of wilding pine control is only going to increase along with it, and, whilst it is easy to say that the council will fund the cost of the control from the increased proceeds from the timber harvest, in reality there is a real chance that the money gets diverted to more pressing matters on the council agenda, particularly as the cost of wilding pine control will have to have tol be paid between now and the harvest.

Why gamble the outstanding natural beauty of the alpine tussock grasslands without any strong basis for doing so?

Yes definitely. It seems cost effective and we should be doing everything to reduce the wilding pine growth risk

risk.

This should be harvested early. The trees are more harm than good. I agree with the proposal.

We should early harvest the forest to prevent the spread of wilding pines on the Coronet slopes .The council is assisting with the control of wildings so to let the forest to contnue to spread seeds does not make sense .

Since 2000 we have become aware of the threat of wilding pines spreading in central otago to bring about a mono culture. The effect is to create a sterile undergrowth and this is not conducive to a thriving bird population.
It is the new gorse and we know that this has cost millions of dollars throughout NZ and it remains an ongoing issue in many regions.
A stitch in time with controlling wilding pines is a strong case for harvesting the douglas fires now rather than in the future.
Witness the forest fires in Canada. The risk of keeping the Coronet forest until maturity is not worth it.

I agree with harvesting early, it seems ludicrous to spend so much on wilding control whilst holding such assets. The figures are so volatile that a call either way based on financials is just an exercise in risk.

I strongly support the early harvest of Coronet Forest.
I note in the discussion document a section on native plantings-yet there is not mention of natives. There is one reference to 'beech' but these could be native or non-native. More to the point there is absence of a considered discussion of the pros and cons of native vs non-native plantings. No replacement plantings should take place until such analysis has been done and there has been the opportunity for public input.

That the trees should be harvested early, and not left to grow to maturity. The costs involved down the line in controlling the seed source will only grow. Also, the sooner the trees are harvested, the sooner revegetation can occur on the slope.

These should be harvested early to help stem the spread of wilding pines.

Theses trees should be removed as soon as possible because of the cost of wilding spread. The value of leaving them until ready to harvest can in no way match or outweigh the cost of wilding control caused by these trees . It is very likely the cost of leaving them until ready to harvest is considerably more by orders of magnitude than the return, in a market that is know to be fickle.
The costs include the direct costs of wilding control that would have to be done for another 25 years, and that includes controlling the trees spread from wildings originally from this source and these are heading towards Cromwell now and down the Cardrona valley; and there are the externalities in terms of changes in ecology, hydrological regimes, impacts on tourism (for example, negative attitudes towards standing dead trees, and towards wilding spread and loss of open grasslands), impacts on farming, etc.
A further cost is that because of the enormous resources that would have to be put towards controlling the massive spread from this forest, there is incapacity to direct resources, including volunteer labour, to other areas requiring wilding control where there is better value for $ spent

areas requiring wilding control where there is better value for $ spent.

The Mahu Whenua covenant could instead redirect hundreds of thousands of dollars into other conservation activity, if it didnt have to spend it on continuous control of wildings coming from this source.

As long as seed source remains, wilding control is a futile and ever compounding task in the long term. These trees must go as soon as possible. Council should assess all its other risk trees on council land with a view to removing all trees that are a source.

A plan for revegetating the area is also part of the process and this needs to be prepared as soon as possible, to allow for growing on of the large number of plants that will be required. Ideally the revegetation would be indigenous, complementing natural regeneration that will occur. Ecological assessment of potential for natural regeneration and for weed invasion potential also needs to be undertaken.
The inclusion of exotic species is not inappropriate, providing they contribute or at least do not detract for healthy ecosystem functioning and are not a spread risk species. The idea of autumn colour would be appropriate, and could create a stunning backdrop to the Wakatipu basin in autumn..

Harvest now, To leave will cause increased cost to ratepayers in the region with little or no net financial return in the overall washup of the project.
Looking back when forestry returns were more acceptable I can see the reason why so many councils got into forest planting but here we got into the game too late and now it could become another millstone.
We like the idea of replanting the slopes in trees similar to above Arrowtown

I'm keen to see the trees harvested early and replanted in natives.

Early harvest is the most cost effective and environmentally responsible option - in terms of wilding spread. I also strongly support working with local socially responsible business such as Wilding & Co.

Take the forest out now. The cost of leaving the forest is badly underestimated, The mature trees are seeding profusely. A walk over the vast area beyond the forest shows a crop of small to several year old wildings beginning to carpet the tussock. If the forest is left to mature, say another 15 years, the areas will require spraying at least twice and another time or two after the removal e.g residual seed sitting in the ground and then germinating.
Three factors in the Scuttlebucke require amending:
1. To leave the forest will cost far more than the estimate of wilding control.
2.The seed is blowing into the Arrowtown embankment and wildings are already outgrowing the autumn coloured trees.
3. National, Regional and Local councils are all promoting being a "good neighbor"in relation to not allowing wildings to seed onto vulnerable lands. The Arrowtown forest is a bad neighbor. Council, set and example to other landowners.
4. Every time the area beyond the forest is sprayed for wilding control all the woody native plants are killed. An estimated three to four sprayings while the trees mature, and at least one after the forest removal will leave a damaged tussock country

Due to the increasing amounts of wilding pine that will result from leaving the Coronet Forest in situ, it is my

Due to the increasing amounts of wilding pine that will result from leaving the Coronet Forest in situ, it is my opinion that this forest should be harvested early. Regardless of the financial priorities, the fact that more and more wilding pine will result in being seeded, this is a big enough reason to get the pine harvested.

My wife and I moved to the Lake Hayes area 12 months ago and our property looks directly up at the forest. The view is contaminated by the non native trees and we are fully in favour of harvesting at the earliest opportunity.
Further west the wilding pines have been sprayed and look an eyesore with the dead trunks, which needs to be either burnt or dropped.

I would like to see the current trees harvested as soon as possible.

They should provide good income which can be used for further planting of " non wilding" species. The wilding pine problem in our district is a real concern and the immediate harvest of the forest will minimise the spread of seeds

I think they should be harvested as soon as possible and native plants planted in its stead.

regards

Peta.

Please harvest the Coronet Forest as soon as you can.

I believe this should be harvested early and native trees planted

Definitely harvest them as soon as possible! Leaving them will ultimately cost more in the long run.

Harvest them early

Harvest them early

I'm for harvesting early. The wilding pines MUST be kept under control.

Reading the for & against comment, It has to make good policy to harvest early. So my vote would be to harvest early.

I think the trees should be harvested early.

Go for it

Do it now & replant before the wilding pine problem gets worse!

Harvest early to reduce the cost of controlling the spread of wilding pines and get the revenue sooner rather than later.

Harvest the pines early, replant with Natives. Limit wilding pine spread and the cost controlling them.

getting rid of the wilding pines can only be a good thing. We have plenty of native species that can fill the gap and provide a good native habitat.

Definitely will be beneficial to harvest them earlier even though it will not receive the full potential for the investment, I believe that it will help with the fight against the spread into the back country

I think you should definitely harvest the coronet forest early and replant with natives. The sooner the better. I'd be happy for this to happen all over the district even if it raised my rates.

The forest should be harvested as soon as possible to stop the spread of wilding trees. The wilding tree problem was not really understood at the time the forest was planted I think in the early 80s. It was seen at the time as a revenue earner for the council. However the situation has changed dramatically since then and we are faced with wilding pine invasion getting out of control in some parts of our district. Why add to this problem by letting the forest reach maturity. The land behind the forest is susceptible to wilding spread and would not be easy to control. The Proposed District Plan talks of banning wilding pine species in the district. Council should not be in the position of supporting pines on one hand and eradicating on the other.

I agree it would be best to harvest them early, to help save further devastating damage from the wildings spread. It should be put back into native forest.

Harvest early. The earlier we can replant / repair the land the better. Once the trees are harvested there will be a good 5-8 years or so of ugliness and the earlier this happens the better. Landowners under the forest should also have their wilding trees removed as part of this plan.

Harvest now. Cash up and slow the spread of Wilding pines

They should be harvested a s a p to stop the seeding of wilding pines

Harvest now, limit the trees that add to the Wilding pine problem and cash in early

Harvest them now

early harvest would be the right way to go if we are going to take this wilding pines situation seriously.

To me it makes much more sense to harvest the trees early (and attain less financially from selling them perhaps) than continue to spend huge amounts of money on trying to control wilding pine growth everywhere else in the Basin.
If left to grow to maturity (and continue to seed) , the spending on wilding pine control would likely have to be increased year by year. Which would offset the supposed financial gains to be made by leaving them to mature before felling and selling.
As much as I really dislike the idea of getting rid of mature stands of trees , the spread of Doug Fir is already almost uncontrollable - but if we keep trying to contain it year by year, bit by bit, area by area, we WILL succeed in managing this invasion.

I think it's far better to fell them earlier - then proceed with the revegetation of the hillside with a mix of native and exotics (deciduous and evergreen) AS SOON AS POSSIBLE

native and exotics (deciduous and evergreen) AS SOON AS POSSIBLE.

Would the guys who set up the promising sounding business harvesting oil from doug fir be interested in harvesting(some of)these trees? Access for felling is probably better than in most areas.

Hopefully there would be financial returns to local workers when it comes to re planting, and to nurseries for providing the plants etc. And whoever would do the ongoing maintenance required.
Paid for by the the funding bodies who currently provide $ for wilding control? Ratepayers?

It would look horrible initially but, in the long run, more tree varieties would be much better ecologically for birdlife etc and (hopefully native seed dispersal) in the district. Reforesting our hillsides with natives as well as a few colourful exotics would be fabulous.

Preventing the return of doug fir (and broom) on those areas is not going to be easy though. Not to mention keeping goats, deer, possums etc from eating newly planted young trees.

Good on the councils and wilding control groups for addressing this important issue - AND consulting with the community.

Thank you
Bindy Crayford

it is important to harvest early to remove seed source and reduce increasing cost of wilding pine control programmes.

Either type of harvest seems much better than the hideous spray and kill we have seen so far in various places most particularly above Roaring Meg. I believe those trees were planted specially to prevent erosion so I wonder what may happen if we have another serious rain. The trees below Coronet Peak were planted I think as a serious investment so I am pleased to hear that poisoning them may not happen and that replanting of not just rather drab natives but also some bright exotic trees is to happen.

Please harvest the trees as an action to reduce the spread of wilding pines.

I believe a lot more information needs to be made available before any effective consultation can occur

Some basic information needed is

.1. The proposed method of harvest
2. Is whole forest to be harvested at once or is it to be staged. How long is it estimated to take to harvest the whole forest
3. The estimated length of period for revegetation to mature to hide harvest scar noting no replanting will occur for three years

Could you please provide this information to the public

Thank you

I I

I find the spraying out of wildings very ugly and unnecessary. I would prefer the trees be left to grow to economic maturity. What will be put in their place if you get your way and cut them down?
There seems to be an obsession for natives everywhere, I think a mixture looks good and the mixture is evolving.
So I would really not be in favour with the proposed harvest of Coronet Forest.

I would like to see the current trees harvested as soon as possible.

They should provide good income which can be used for further planting of " non wilding" species. The wilding pine problem in our district is a real concern and the immediate harvest of the forest will minimise the spread of seeds

I am for harvesting early.

Besides the direct cost benefits for harvesting early, there are also the indirect (non-measured) benefits to native birdlife and the views that residents and tourist enjoy.

Removing the trees is the right thing to do.

The current crop of trees should be harvested/removed as soon as possible. Many cautioned against the planting at the time and it is now clear to all that the forest should never have been established in the first place. Assessments of financial gain (immediate harvest vs long term harvest) are an irrelevant distraction from the fact that the trees are foreign barbarian species that are an increasing threat to our environment.

Please =harvest early to help control the spread of the wilding pines - the tussock slopes above arrowtown are disappearing fast

Good idea to harvest early.

Good idea to harvest early.

The council needs to address the fundamental issue of Wilding Pines so get rid of them. This also shows leadership to other land owners and avoids hypocrisy. Conveniently, the costs of the effort might be close to neutral so its not as if the council is taking a major financial hit to get the clearing underway now.

Hands off!

Hands off.

Please don't harvest these trees early. They look beautiful and provide and a wonderful contrast to the millions of acres of tussock!

Queenstown is seen is an Alpine Resort and i believe some of these plantings, especially behind Queenstown itself enhance this specialness.

Why not stick to the ring fence spraying approach like in other areas.

That would be a much better option.

I support the early harvest in order to press ahead with planting a more attractive and more appropriate treescape.
The existing planting is monochromatic and fails to reflect the beauty of the local mountains

Yes, the forest should be harvested as soon as possible.

Please harvest early

Based on the presented information it is very clear that allowing the trees to grow bigger and spread a greater number of invasive wildings around the surrounding area is entirely unacceptable relative to what can only be described as negligible if any financial upside.

This is a no brainer, to harvest the trees now is simply better for the Basin's future.

Best regards,

Thomas Richwhite

Please harvest early to reduce wilding risk

i would submit that qldc/codc should harvest early. my reasons are.

1] the cost of managing the wilding spread is understated and more difficult than notified. repeatedly spraying the area around arrow-town will only get more difficult with time and there is no other cost effective method of control.

2] the autumn colors behind arrow-town will no longer exist with the seed rain from the forest and hand control [as you cannot selectively spray to that accuracy] is cost prohibitive.

3] there will be a visual impact when ever the forest is removed so why not do early before even more people live here and object

4] the area behind the forest is in the QE2 covenant and as such is protected but is being overwhelmed by seed rain from a source beyond their control

5] if substantial money for wilding control is not committed then the councils and others investment in control to date is wasted

6] in all other ares in the district the seed source is being targeted we should lead by example and be a good neighbour

Get it done sooner rather than later, and save us some cash.

Harvest this plantation as soon as possible. The wilding pine problem is horrendous and needs to be dealt with urgently.

Derek & Jill Rothwell

I do believe that the trees should be harvested because otherwise all the hard work put into controlling the trees over the past 20 years will be totally wasted.

This area was not covered with Conifers when it was settled, when people came to see the pristine mountains, so lets see it go back to that.

To leave the trees there would mean that when they seed, millions more trees will start growing. We need our farmland, pristine beauty and eco system to stay the way it is, and not to lose it.

Thank you.

I think harvesting early is an effective option. Replant with native, or less invasive plants.

Have the trees removed. We have a significant Wilding problem and shouldn't be contributing to it.

Definitely they should be harvested as early as possible. Did your analysis on keeping the forest to maturity include lost tourism income? Go and count the number of tourists photographing the hill side at Arrowtown at the moment. There are 100's per day. I doubt they will be there when the hill side is covered in wilding conifers. One less attraction.

T
Remove conifers a reforest with non wilding species

I think harvesting the trees now is a great idea. The cost of controlling wildings from the seeds can't compare with the cost of keeping them to maturity.
Volunteers are getting dishearten by going year after year to control the wildings, only to see them getting away fasting than we can control them.
We are not Aspen please can people stop comparing us to Aspen. We will never look like Aspen, we are

New Zealand with the beautiful golden tussocks and our own special flora.

harvest Early and avoid seed dispersal of wilding douglas fir

Those trees must go, the sooner the better. The trees are a threat to our tussock land and the wild life that depend on it. If left the effort to contain them will either be hugely costly or will fail and that will change the entire region ecology forever.

I think it would be a great idea to harvest early and go ahead with plans to replant with native trees to Nz with Wakatipu Reforestation Trust.
This a positive way to create jobs for people living here and as this would take years after harvet and to be able replant etc. its best to get a move on!!!!!!!.we love native trees, bees and birds. Please

Ann, (my wife) and I both feel we should harvest Coronet Forest earlier rather than later.

For all the reasons you have outlined for consideration of cutting early, especially the fact that there is currently a small premium for Douglas Fir we support an early harvest.

Thank you...

Coronet forest should be harvested early because the damage of the spreading wilding pines beyond the forest is huge and growing at a very fast pace.

Harvest early, if not immediately.
Leaving trees will ensure that wilding problem trees are never beaten.
Difference between doing and not doing is negligible relative to the cost to Wakatipu potential for tourism benefit. Reforestation in native beech and acceptable exotics will provide a greater benefit to the region as a tourism destination.

The total situation is so complex involving Government.Regional and Local Councils and competing interests all with their own views it is doubtful that any proposal will get wide support!! Leaving the council to make the decision and carry the blame and the public to carry the unknown final costs??On an isolated basis i would support the early harvest rather than any more widespread spraying.There has to be a policy of attractive replacement with far less reliance on native planting which has very few colours and which are in abundance in the many protected areas throughout the nation.

Support based on the research provided in the scuttlebutt. The savings and environmental impact make logical sense.

QLDC should (continue to) take the lead in the fight against wilding pines.

The cost benefit analysis, while marginally in favour of early harvesting, only takes the position so far. While there are a number of variables in the analysis (e.g. price volatility), the crucial fact is that "The bigger the trees get, the more seeds they will produce". The likely impact of those seeds can be assessed, but must to some extent remain a matter of speculation. Their spread is wind dependent, which itself is inherently

volatile. Therefore, inevitably, delay in harvest will increase the risks of spread of seedlings and the costs of post harvest clean up.

I vote for early harvest.

essential to cut down early to reduce amount of seedlings and wilding pines

The Coronet Forest should be harvested early and re-planted in native species.

I am sure that the profits would be far greater if the forest was left to mature. Yes wilding control is necessary in the areas we do not wish trees to spread to. But the Douglas fir is a beautiful tree in it's own right and if left to mature very profitable as the timber can be used for many purposes. That is why the Forest was planted in the first place. I find your artical in the Scuttle but slanted and fail to see how havesting valuable trees at Maturity can have negative returns. Please seek more expert advice before making your decision.

Harvest as soon as possible.
Use the entire economic gain to rectify the spreading Doiglas Fir this plantation has caused.

If Coronet Forest is left to grow to maturity, the cost of wilding control related to this seed source will be $2.9 million between now and harvest.

I do believe this is an obvious solution to an outdated plan to grow the trees to maturity. Surely the council can see this and make plans accordingly, rather than the confusion of public voice??

I believe the early harvest is an excellent move in preventing the continual degradation of sub-alpine habitat in the lakes district via wilding conifer dispersal. I therefore agree wholeheartedly with the early harvest of this plot.

It is a good idea to consider this now.
It is arguably inconsistent to fund a Wilding Pine programme and have this forest.
In principle we would support this initiative
Some questions arise. These include :
Who would harvest this forest and how?
What is the programme and budget?
What is is the replanting programme?
Is there any role for central government -including funding -given the national significance of the area
We will think further about this
Thank you
Jay Cassells

Leave them to maturity, it is short sighted to be this far down the road to maturity considering the value of timber and demand that will be in the district in 25 years with the district growth rate anticipated, To mitigate

at least some of the wilding problem an early harvest could be done on the very top part which would slow the spread

In view of the wilding potential of this forestry block, and the possibility of lower financial returns in the future, I would favour early harvest. I have spent a great deal of time removing wildings in Central Otago and Northern Southland, have seen the disastrous spread of pines planted in inappropriate areas, and can foresee the problem only getting worse. Cut them now.

I would also urge both Councils to replant the area in native tree species. We desperately need more trees to absorb CO2: and natives would be the way to go in this area. If the increase in tourism predicted (and even encouraged) for Queenstown comes to pass, every one of them should pay for a tree to counteract their carbon emissions. New plantings paid for at the airport?

I would also like to comment on the commercial use of wildings. While a great idea in theory, and ceretainly to be encouraged where feasible in areas where wildings are thick on the ground (e.g. the Roaring Meg), I cannot see any commercial enterprise ever removing wilding Douglas Fir from the head of Doolans Creek, or the South Wye in the Remarkables. Commercial use of wildings will only work where there is vehicle access, and cheap labour.

I agree with the proposal to harvest the Coronet Forest.
This is based on the assumption that the forest remains in the ownership of QLDC and is re-zoned as recreational or otherwise such that development cannot occur on the land. Once harvest has been completed, the area should be re-planted in natives to allow the progression of native forest.

I support the early harvest as a means of controlling the spread of wilding pines.

My view is that the Douglas Firs in Coronet Forest should be removed as soon as possible.

When this forest was planted the certain risk of wilding spread was identified by Barry Lawrence and others, however Council chose to ignore this advise.

Form the evidence submitted here any case for continuing to maturity is neutral from current information. Any possible gain from going to maturity appears to be predicated on unknown or unforeseen developments occurring, harvest cost could just also increase and log prices decrease. The costs of wilding control will only increase and experience in the district shows that the problem is always larger, more complex and more expensive to solve than initial estimates.

Replanting in native species, beech and associated species, will be a very worthwhile project. This will allow skills and techniques to be developed in large scale native re-forestation that can be applied to the rest of the Coronet face, Ben Lomond and Queenstown Hill. A long term project must be to remove the current stands of wilding potential conifers in the Wakatipu and and replace them with sustainable, self managing species. The native species that evolved within our environment and landscape have to be the best option for this

for this.

It is an absolute no brainer.
Harvest the forest asap !
As a neighbour to the forest (Butel Park - Arrowtown), I am continually appalled by the huge numbers of seedlings invading the Butel Park ecological planting reserves, grassed areas, private gardens and the larger Bush Creek reserve area.
The NZO wilding pine seedlings are everywhere !!!! They are in epidemic proportions in the rough native ground areas surrounding our property.
Quite frankly I am appalled by the heavily slanted fiscal approach by QLDC in the consultation document.
Queenstown Lakes District is famous because of the natural environment not commercial forests.
To be fed the financial diatribe as an excuse to continue this ecological disaster is quite frankly an appalling lack of governance by the present council and executive.
Wake up get off you backside take a walk up Bush Creek and see the ecological disaster unfolding before your eyes.
Will QLDC pay for the eradication of the Butel Park owners ecological reserve areas, because your activity continues to foul private land by an unworthy commercial activity which is banned under your own District Plan.
Get the chainsaws buzzing without delay !!!.

My property below the forestry has self seeded Douglas Fir. Which had been clean out a few times over the earlier years but they keep coming back, Especially on the slopes where the sheep and cattle don't graze. Other than a few willows, my block was totally clear of trees in 2005. The number and size of trees that have grown on the block since 2005 has been prolific and I can see they will be a big problem for the district in the coming years.

I am in favor of cutting the forestry early and replanting with local native tree varieties in small clusters along with native grasses.
I would also like to see the use of the block opened up to more outdoor actives. With the trees gone the view from the road across the valley is spectacular. I would like to see more horse , mountain bike, mountain board trails established etc and open it up for more general use once the fire risk has gone.

The Paraglider/Hang Glider training could be re established to use the old take off sites from the ridge.

keep the trees

do not give in to eco-idiocy

you will have large mess to look at

and a bigger mess to clean up

and waste noble trees and timber

remember the Half Dome fiasco

To begin, I am concerned by the misleading information reported in the ODT, that Briana Pringle gave. She said that (as reported) 'The bigger the trees get, the more seeds they will produce'. In the circumstances, this is untrue as far as I know. These trees have reached maximum crown size, it is crown size that determines seed yield, thus seed production will remain about constant. This is not the first time she has misled the public; in 2011 or 2012 at a meeting in Alexandra she replied in response to a question that Pinus contorta tree trunks would not store increasing amounts of carbon as they grew and aged. That is a blatant untruth.

I would like to know the extent of wildling Douglas firs attributable to the Coronet forest. Most seed will be spread to the east in north-westerly winds. There is a significant width of intensively farmed land to the east before one reached non-intensively farmed country, and D. fir seedlings would not be successful on intensively farmed land. It would be useful to have the facts on wildling establishment attributable to this forest, laid on the table.

Writing from a forestry perspective, I have it on good authority that this stand of D.fir is perhaps the finest in New Zealand and is growing faster that any other, It would be a pity to fell it before its time.

Sincerely, Brian Swale, B.Sc. (NZ) MA (Master of Forestry) Oxford (UK)

I support the removal of the douglas fir plantation known as Coronet Forest.
It is a festering seed source, contaminating large grassland areas with wilding trees.
Also it is a dark unattractive block on the landscape.
This should be part of an ongoing and major effort to reduce the explosive growth of wildings especially in the south island.

I support an early harvest to remove the wilding conifer seed source.

harvest to forest NOW.

These trees should be harvested early and as soon as Practical.
My reasons for this viewpoint is that this Plantation of trees is casting seed all over the front high country, and also the back high country. Seeds from these trees are likely contributing in a big way to the severe Wilding Pine infestation in both the front hill country, and the back high country land. This infestation is now

Wilding Pine infestation in both the front hill country, and the back high country land . This infestation is now out of control, and is costing landowners both in reduced production from the land , as well as direct costs to try and control [unsuccessfully] the spread of the Wilding Pines.
The Wakatipu area prosperity is now directly linked to the beautiful natural environment , including mountain sides clothed only in native shrub species, or tussock land, or grass land, or exotic deciduous trees[famed for their Autumn colour]. All of these environments are being, will be, rapidly destroyed by the very fast growing Wilding Pinus trees.
The costs of control measures to the Territorial Authorities to get rid of the Wilding Pines, are such that it is absurd, and unethical,l to on the other hand maintain a Plantation which is such a threat to Modern Wakatipu.
Please harvest what you can from the Plantation , and as soon as practical, there will be some one off income to be gained for the Councils concerned.
The land under the trees will need to be returned to some what the original state . Maybe some of the gullies could be re- planted in native Beech ?.
Who actually owns this land ? can it be turned into a reserve ? or returned to adjoining land owners ? or to Kai Tahu ?

Chop the trees down! You don't fatten possums to get more fur, why leave these pest trees to get more wood !!!!

Yes, absolutely harvest them ASAP. It is a complete juxtaposition and a completely hypocritical situation to be contributing to the wilding pine problem whilst at the same time providing resources towards control of these pest plants. Devils Creek, Sawpit Gully and other beautiful spots are in danger of being lost to these plants, and over the ridge from coronet forest is the same I am sure.
Get rid of the forest asap.

Hi
I would love to see the tree mature to full maturity for maximum timber harvest
Kind regards
Daniela

This plantation should be removed as soon as possible. It is totally inappropriate for the region and is a very damaging seed source for wilding conifers, as can be seen on the beginning of the Saw Pit Gully walk. Planting Beech trees in their place or leaving it in open tussock-land would be a good solution.

The conifer plantation on Coronet Peak should be removed as soon as practicable. Visually they are an eyesore and are a very damaging seed source for wilding conifers. Their earliest possible removal should be a council priority.

I believe this forest should be harvested as soon as possible

My thought is that it is a very bad idea to "harvest" these trees early. I fact I would oppose "harvesting" them at all.

Apart from the flawed reasoning about "wilding pines" in the first place, we must be one of the only countries

in the world, in a time of obvious global warming, to be purposely killing perfectly healthy trees.

This Council really needs to re-think its ideas about "native" and "non-native", as there is no such thing, just as there is no such thing as a "wilding pine". It is all purely an aesthetic construct without any foundation. And if you admit that the whole topic is one of aesthetics (we think "natives" are better than the "non-natives"), then nobody, not even the most rampant tree- destroyer could prefer the aesthetics of the tombstone tree stumps on the Coronet Peak Rd, or the hectares of poisoned brown ghostly tree-corpses above Queenstown, Arthurs Point or on the Skippers Rd to what was there before.

I have yet to meet a visitor who hasn't voiced horror at the ugliness of this destruction.

In any case, in the warmest April in the warmest Autumn in the warmest year, it is now no longer a question of aesthetics, but one of survival. We need to plant and maintain as many photosynthesising trees as possible, not kill healthy trees with poison or chain saws.

This forest is a poorly maintained forest and a massive contributor to the wilding ecological disaster - the council, as custodians for the future of our 'Outstanding natural landscape" must do all that is possible- cutting down the forest and aiding landowners to eradicate the pests trees, NOW as latter may be too late- just have a look at Crown Peak and Sawpit gully.

Get rid of them now. The cost of maintaining them are likely to be greater than any projected return.

That council's comments on this are slanted so strongly towards early harvesting that a decision has already been made. If that is the case I will be seeking compensation because prior to spending in excess of $1M to purchase property on Malaghans Road in 2006 we approached council and were shown maps of the forest and assured harvesting was a minimum 20 years away.

Although Queenstown has grown apace in the 18 years I have lived here, it would appear that those charged with it's care still suffer from the same small town mentality that allowed Auckland Airport a share in ours for a fraction of its true worth. Millions lost to the area that we will never recover. And here we go again, the short sighted looking to make a quick buck, take the easy way out instead of addressing the issue of wilding pines, the cost of which was surely factored into running costs when the forest was planted. And why the sudden need for fast money? Would that be to fund that other monument to a certain person's ego, the convention centre.

And if this mismanagement of another of the towns assests does go ahead, how thrilled the prospective multitudes of of Chinese visitors will be to see a battle scarred, ugly hillside the likes of which they could have viewed at home. In an area of such outstanding beauty I would have imagined the wise would be looking at ways to preserve the investment while putting off the day a beautiful hillside is desecrated. Most days, I see people on Malaghans Road, out of cars, cameras in hand, snapping away Not much worth snapping for many years to come if this insanity goes ahead.

Jill Martin

Jill Martin

Harvest early to prevent further spreading and potentially save money rather than spend more trying to prevent spreading.

The forest should be cut down and replanted with natives. It makes a significant contribution to the wilding pine catastrophe enveloping our region. If anyone disagrees with this position they should go for a walk up saw pit valley and see the damage that is being caused. The first dollar we spend in connection with controlling wilding pines is to remove this plantation.

Harvest early as the problem will only deteriorate further as the amount of seed produced will only increase as the trees mature. If left the natural beauty of the area will be adversely effected.

Go for it. Proceed with an early harvest and reuse the land for something better for the community.

The Queen Elizabeth II National Trust (the Trust) is an independent charity established almost forty years ago under its own Act to facilitate the protection and enhancement of natural and cultural heritage on private and leasehold land for the benefit of present and future generations of New Zealanders.
The principal means by which the Trust achieves this objective is through establishing open space covenants with individual landholders over land or bodies of water to ensure protection in perpetuity of natural or landscape features of aesthetic, cultural, recreational, scenic, scientific or social value.
Covenant agreements run with land title and are legally binding on present and future owners and occupiers of the land.
With the introduction of the 'New Zealand Biodiversity Strategy' in 2000 and the 'National Priorities for Protecting Rare and Threatened Native Biodiversity on Private Land' in 2007, the Trust has put a high priority on securing covenants that protect indigenous vegetation and/or habitats that meet one of these four national priorities.
Open space covenants are complimentary to Councils' obligations under the Resource Management Act 1991 to promote the protection of natural and physical resources; and to safeguard the life-supporting capacity of air, water, soil, and ecosystems; and provide for the following matters of national importance:
• the preservation of the natural character of the coastal environment (including the coastal marine area), wetlands, and lakes and rivers and their margins, and the protection of them from inappropriate subdivision, use, and development:
• the protection of outstanding natural features and landscapes from inappropriate subdivision, use, and development:
• the protection of areas of significant indigenous vegetation and significant habitats of indigenous fauna:
• the maintenance and enhancement of public access to and along the coastal marine area, lakes, and rivers:
• the relationship of Maori and their culture and traditions with their ancestral lands, water, sites, waahi tapu, and other taonga:
• the protection of historic heritage from inappropriate subdivision, use, and development:
• the protection of protected customary rights.

In March 2015 four open space covenants were registered with Soho Property Limited (SPL) protecting more

In March 2015 four open space covenants were registered with Soho Property Limited (SPL) protecting more than 53,000 hectares of iconic land across Motatapu, Mount Soho, Coronet Peak and Glencoe Stations. The entire protected area lies within your council's area of jurisdiction. The covenanted area has been permanently retired from grazing and is now being managed for its natural, biodiversity, cultural, catchment, landscape, recreation and amenity values. The covenants represent a significant asset to the community and the nation.

The purpose and objectives of the Mahu Whenua covenants are to:

• manage the covenanted land as a kohanga (a nursery area for the surrounding district)

• protect and enhance the indigenous biodiversity and open space values

• encourage the restoration of indigenous plants and animals including any threatened species originally from this area

• protect the covenant area, its aesthetic natural landscapes and features which are national landmarks and which contribute to New Zealanders' sense of place.

SPL entered into these covenants voluntarily for philanthropic and altruistic reasons. These covenants were not a condition of purchase stipulated by the Overseas Investment Office (OIO). SPL has already put a huge investment into the ecological restoration of these four stations and the establishment of huts, tracks and other facilities.

Wilding conifers represent a major threat to the key purposes and objectives of the covenants.

The purchase of Coronet Peak by SPL came with an Overseas Investment Office requirement that almost $1 million be spent on wilding tree control. In excess of, $1,400,000 has been spent with additional expenditure on Glencoe, Mount Soho and Motatapu Stations.

At the time of purchase, wilding Douglas fir, sycamore, lodgepole pine and larch were spreading across the landscape, especially into areas protected for conservation.

Wilding tree control is a key component of an ambitious goal by SPL to restore the country towards pristine condition so that native fauna and flora can flourish. Control of Douglas fir is particularly challenging because of this species ability to establish within beech forest remnants and mature shrublands. Tree control in these areas of high biodiversity is technically challenging and expensive.

The Trust is working in partnership with SPL to maximise conservation outcomes on the Mahu Whenua Covenants. In recognition of their importance, the Trust has committed substantial resources in the form of extensive photo point monitoring, preparation of management plans, design of signage and interpretation, coordinating voluntary tree control, supporting a wildlife release programme, raising the profile of the area and its conservation challenges and facilitating a research partnership between University of Otago, the Trust and SPL.

Monitoring has established that SPL are making significant inroads into wilding conifers on the four properties; however, on Coronet Peak and Glencoe Stations progress is compromised by continual spread of trees from external sources, the most serious of which is Coronet Forest. Seed from this plantation continually infests nearby Bush Creek, the Coronet Faces, the lower Arrow, and the eastern faces of the Crown Range giving the work done by SPL, WGC and volunteers an air of futility. Seedlings almost certainly sourced from the Coronet Forest are establishing over a much larger area at reduced densities.

Early Removal of the forest would allow for re orientation of resources by SPL and its partners away from constantly re infested areas into more peripheral locations before new seed sources establish. Accounting

for reallocation of resources into new areas and the associated future cost savings, greatly improves the cost/benefit ratios outlined in background information provided by your council.
The Trust commends QLDC on your initiative to consult on removal of the Coronet Forest. Early harvest and subsequent control is the right thing to do from biodiversity, landscape, soil and water and economic perspectives.
The Trust supports your council's intent to investigate restoration of the area following removal and subsequent control of regrowth. SPL have similar ambitions for areas within the Mahu Whenua Covenants.

Chop them down, and while you are at it get rid of the trees that stretch from Skyline to Gorge Rd, every now and again one falls down, the crashing noise is quite scarey. The benefit of leaving the trees to become more mature and possibility of more money for firewood is outweighed by spread of seedlings. I constantly oof out small trees from my property, I did not plant them or wish to share my space with them. Natives are a better option, I have my own little forest at Huff St and have asked QLDC to make it a reserve, declined. The tuis and bellbirds should be considered and get rid of the possums.

I am in favour of an early harvest of Coronet Forest

Yes it should be harvested now.
Besides eliminating the seed source, it reduces the chances of whinging neighbours to stop it happening

I think an early harvest is a good idea. The earlier the area is cleared the less cost there will be all around. Leaving clearing to later may not be cost effective due to increased costs of harvesting and wages etc.

I cannot understand the council allowing these trees to continue seeding. They are a 'tree weed' destroying the bio diversity of the landscape. On one hand we are spending rate payers money to destroy these tress - why are we then maintaining a seeding base for them? Mill immediately regardless of the income they produce. I'm sure all ratepayers understand.

Regards
David Broomfield

I believe they should be harvested early because of the wilding pine problems. We have recently been walking Sawpit Gully again after a space of a few years and have been horrified at the spread of pines in that glorious area behind Arrowtown. Our home also overlooks Tobins Track and over the last few years have seen the worrying increase in pines here which is changing our autumn colours quite visibly with more greening each year as these pines grow quickly and are already spreading from this source.

Lets do the right thing now before it is totally too late and we will live in a area that looks more like Scandinavia than New Zealand.

I strongly encourage QLDC to harvest Coronet Forest at the earliest opportunity. Wilding conifers are well known as a plague on our landscapes and as a significant environmental problem. It is great that QLDC has been helping to fund wilding control over recent years. It is contradictory and counterproductive for QLDC to be simultaneously controlling and contributing to the wilding problem.

On a purely economic basis retaining the trees to maturity is a marginal investment, however concerns and plain common sense significantly outweigh economic considerations.

Harvest them now!

Hi. I want the trees to be kept growing up until their proper harvest time. Erect wind cloth around the downwind boundaries of the forests to decrease seed scatter. The wilding problem is where intelligent action needs to be taken.
Using aerial maps look at the whole surrounding area. Divide the land areas into action areas & develop a plan encouraging humans teams to mattock out the seedlings, cut the bigger wildings for home firewood & Christmas trees at Christmas time.
School fund raising teams could be paid the going rate & sell the wood etc. Same for good works clubs & gym club promotions.
An on-going source of labour also could be folk needing to undertake restoretry (sp?) community service.
Another option could be volunteers, who according to physical contribution, could earn some shares in the forest that would be monetised at harvest of the forest.
Major benefits for Central Otago are: Cardrona Forest plan is allowed to achieve it's original objectives, capture & sell carbon dioxide to benefit all local citizens & contribute worldwide.
The more often & more invested local citizens are in their own area, the more care & pride develops.
Physical effort promotes good feelings, better health & well-being. Council uses rates money to provide fairly passive entertainment, promoting & organising active people participation will be the modern way to go. Already the will is there. The degree of volunteerism for the local racing events, Warbirds events, school activities backs this up hugely!
Cheers,
Lorna

Given the statistics provided, as well as my first hand experience of bike riding and walking around the Coronet Peak/Arrowtown area, I would agree with the WCG and say I think it is a good idea to harvest early. The wilding spread on Coronet and behind Arrowtown is in plague proportions. It seems counter intuitive to continue to fight the spread of wildings each year without first controlling the source. Re-planting of native species would have long term environmental and economic benefits, especially in our highly tourism based local economy.

Submission from Basil Walker

Douglas fir or irish pine as we amusingly call oregon has fallen from favour as a building material
It was previously popular because it had qualities of remaining straight but has steadily become a non preferred timber .
The use of nail guns in construction has sped the decline because Oregon has tendency for nails shooting away from the intended direction.

The construction industry is now clouded by HEALTH and SAFETY requirements and mistakes with nails are no longer ACC issues but H&S with huge repercussions for the unfortunate person involved .
the timber is still ok for barns and non wet situations but not as valuable a resource as when planted .

I support the Wilding Pine spraying process and understand the cost of spraying .

I sincerely believe November 5th would be appropriate to BURN the FOREST at minimal cost

Basil Walker
Queenstown
[redacted]

I have walked the Sawpit Gully Track circuit since 1980 and taken part in Wilding Pine eradication around German Hill. It has been with great concern that over the last ten years I have noticed the spread of Wilding Douglas Firs & Pines in the Bush Creek basin and halfway up the slopes of Brow Peak, plus not far from the top of German Hill. It is quite clear that some of the seedlings which have grown to young trees have originated from Coronet Forest.
If the forest is to remain for another 15 years or more, there is no doubt that further spread of Wildings will take place in the areas mentioned. There will be great expense for the landowner to control the existing wilding trees, as well as on going working bees of volunteers for years after the Coronet Forest has been cut down.
The financial gain for Council by extending the life of the forest, is not worth the financial drain for landowners to fight wilding tree removal on their properties. It will also have a detrimental affect on expansion of native plants, in particular Mountain & Red Beech.
The on going wilding tree issue has been a concern of mine for many years. I therefore want to see the forest harvested early.
Thank you
Hans Arnestedt
Trustee - Wakatipu Reforestation Trust

It should be harvested now or within the next couple of years, the aesthetic damage its causing far outweighs any monetary value the timber would produce and as mentioned even if you do wait for them to be harvested at maturity they could be wiped out at any time by fire or storm.
It also gives any landowners who are reluctant to remove these trees a valid reason not to.
You must also take into account an early harvest would give that much more time for the native plantings to establish themselves and start colonising the area.

If the money side is roughly even for both outcomes then surely the aesthetic and conservation values of harvesting early win.

Thanks

I look forward to a wilding free wakatipu basin

This forest should be harvested as soon as possible to stop wilding spread.

this is an excellent idea to have an early harvest of Coronet Forest, the sooner the better

I am against the early harvest of the Coronet Forest. The horse has well and truly bolted on wilding pine spread with the withdrawal of livestock grazing the upper slopes of this area, as was the case in earlier times. There will never in my opinion be enough resources to combat this and so we should accept that change is inevitable on this issue and stop wasting money spraying small areas as limited resources become available and leave the eye sore of acres of dead trees which will be very combustible once dry. In hindsight planting the forest was probably not such a great idea, but we of this era need to leave the forest mature and trust that at that time it can be harvested for profit.

Harvest it early to limit ecological damage from wilding trees.

Harvest early so that the spread of the wilding pines can be mitigated otherwise Arrowtown is in danger of losing its autumn colours to the already spreading wilding pines. If the cost of controlling the Wilding Pines is going to outstrip the funds from the sale of the mature plantation then clearly it also makes sense economically to harvest the pines early.

Excellent idea. I can see the spread of wilding trees up the slopes of Brow Peak originating from that forest from my home. A high priority to avoid much higher costs for control later

Wilding pines are spreading rapidly resulting in a deterioration of the natural landscape of hills surrounding the Wakatipu basin.

This spread must be contained, and a real effort made to remove those wildings already established. Given the Coronet Forest is a proven source of seed, the resultant spread of which is easily visible on the hill sides beyond the Forest, it is logical to remove them.

Cost/Benefit is obviously considered, but what price do we put on preserving our landscape.... even if a loss on direct financial returns results the non-direct benefits are huge. By replanting, as proposed, with 'autumn colour' species we can enhance the area. Also we will get a chance to remove those wildings already making inroads to the existing autumn colour areas.

Harvest the forest now for the future generations of, and visitors to, the Central Otago area.

Notes As emailed to Briana earlier:
We've had the odd query about progress regarding the future of that forest during Vincent Community Board meetings here in Alex, but nothing concrete has been forthcoming. I recall attending a meeting with Phil Melhopt and Graeme Bell at QLDC a number of years ago when harvest and seedling control was being discussed - we're really not much further ahead.

It would be good to keep us in the loop given that CODC is a part owner, and my personal view is that harvest and tree replacement with more benign species (native or otherwise) should be a priority for the near future. Yes there might be a chance of returning higher timber prices in the next decade, but they could also drop as surplus timber from other countries enters the market. And the incremental gain in timber biomass during that extended period would be negligible compared to that gained from inception of planting until now. The potential cost of seedling control as outlined on the website info is pretty scary by comparison, and it doesn't end when the trees are removed, so in my mind it is a no-brainer to consider early harvest and an acceptable re-planting program.

I guess you also need to keep in mind the recent amendment to the QLDC DP in terms of acceptable tree/shrub species otherwise wilding trees may simply be replaced with Larix, Sorbus or Cotoneaster or a host of other weedy plants. Brier is bad enough, but most landowners can live with and manage it. Clearly we need ORC on-side with these recommendations as well, but their PMS and LTP has been pretty devoid of lateral thinking on these issues until now, despite plenty of submissions to the contrary.

Anyway, just some thoughts.
Barrie

It makes sense to harvest those wilding pines early as they spread seeds in our environment.

The Wakatipu Riding Club has recently renewed our five year license with QLDC/CODC to use the track up the Coronet Forestry for horse riding. This is the only dedicated horse trail in the entire Wakatipu Basin, where horses and riders are not at risk from motorists, truckers, cyclists and /or motorcyclists. It is well used and much appreciated by our large community of horse riders.

That said, we appreciate the need to control the wilding conifer situation, and understand that the forest presents a large source of wilding seedlings. After reviewing the estimated costs/benefits prepared by QLDC, there is no difference when using the "conservative model" between harvesting early or waiting until maturity. And, the "optimistic model" presents only a relatively small gain when harvesting early, compared to the losses that would eventuate using the "conservative model". Thus, we don't believe that there is a significant argument for either decision based strictly on the dollars.

I would like to propose that the QLDC look at harvesting in about 4-5 years. This would not have much impact on the costs/benefits compared to harvesting early or waiting until maturity, but would give the Riding Club the remainder of our term to use the forest. In addition, the Riding Club and the Shotover Country Bridle Club are hoping to establish a dedicated equestrian area in which to ride over the next several years. If QLDC were to wait for 4-5 years, then there is a good chance that we will have somewhere else to ride by the time the forest gets harvested. Lastly, I would like express our desire to work with QLDC to allow horse riding in the newly planted forest, whenever that should occur. Thank you.

Should be done as soon as possible

3 arborists have advised us this forest is making the fastest recorded growth rate of Douglas fir in the world. It is now a bountiful seed source which will establish itself rapidly overwhelming the remaining native forest in its vicinity[Bush Creek,- upper Arrow reaches, and gullies on Coronet Pk] and invading the open tussock lands to Lake Wanaka and Cardrona.

The failure to remove this seed source will result in a huge blow out of costs to control an explosion of wilding Douglas fir creep-

Any loss of revenue from early harvesting is hugely exceeded by the eventual control measures which will result from leaving this seed source .

Hi, I'm keen on supporting early harvesting of the Coronet forest to prevent further spread of wilding pines. This forest lies to the south west of a significant landscape. Given our prevailing winds come from the west there is potential for spread of wilding pines right through the landscape beyond the forest - if it is not already occurring. Harvesting this forest early will assist in slowing any future spread of the wilding pines and help in retaining our natural landscape values for future generations.

This makes complete financial and ethical sense. The cost of wilding pines is huge- financially and to the environment. Now is the time to prevent further spreading of these seeds through earky harvest before mire land and native species are further compromised. Let's not be greedy but see the situation fir what it really is - land being taken over and destroyed for the financial gain of a few.

My name is Clive Manners Wood. I have lived at the old Ben Lomond Homestead, past the Coronet Peak turnoff, for 38 years. My wife Shane and I have an understanding of keeping our land free of weeds and invasive plants.
The Coronet Forest as a commercial venture is worthless. When considering the harvest would involve heavy machinery scouring a steep hill, which would let the topsoil being washed down in a heavy rainfall. Opening the soil would create a giant seed bed. Broom, more wilding pines would create another ecological disaster.

Simply spray it. The russet colour is the best solution.

The Wakatipu Reforestation Trust would like to see the Coronet Forest harvested as early as possible.

This will prevent the continued supply of seed which is causing a major problem both from a biodiversity and natural habitat perspective but also economically in the cost of removing wilding conifers.

THE WCG exec's open letter to QLDC councillors re the Arrowtown Forest.
We offer nine factors for the immediate removal of the forest.
1. The wilding spread. WCG receives constant reminders that Saw Pit gulley and the downwind area beyond the forest is inundated with small to medium sized wildings. Informed community people know the problem while people driving past only see the forest.
2. The cost factor. After seven years of investing in control work WCG knows that the area of trees always extends beyond the original costed area. Ground crews and helicopter pilots constantly report more trees beyond the planned control spots.
3. The required repeat controls. . If the forest is left to mature, say another 15 plus years especially for the trees at the top of the forest which will mature later, the control areas will require spraying at least twice and another two times after the forest's removal e.g residual seed sitting in the ground and then germinating.
4. The math factor. While control costs of D-fir are sometimes limited to a three km spread the reality is that light windblown seed from the forest is spreading well beyond estimated boundaries.
5. The Arrowtown embankment. Forest seed rains onto the Arrowtown embankment. Green conifers are already outgrowing the autumn coloured trees. AVA is deeply concerned at the conifer influx.
6. Moral factor. As guardian of Wakatipu's ONL Council can hardly recommend a by-law banning the planting of wilding species while at the same time owning the largest forest of trees with windblown potential. Tourism is landscape dependant, lose the unique vistas and a Wakatipu drawcard will be lost
7. The NZ wide awareness factor. National, Regional, Councils and communities are taking action on wildings. Wilding control is predicted to be in the Budget, ORC is funding and promoting wilding control. QLDC wisely budgets wilding work. Our communitiyrecognises the problem. Now is the time to decide.
8. The NZ Wilding Conifer Strategy reinforces the "good neighbour "policy. Landowners it states ''fail to be responsible neighbours'' when seed blows onto the neighbours land.
9. The scorched land factor. Every time land is sprayed the woody native species die. The land behind the forest will require four sprayings only stunted tussock and browntop will survive.
Now is the time to decide

No to early harvest.

More time needed to look at this plan and the replanting.

Could this not be done in stages with felling and replanting different areas over a few years as the disturbance to the area and the visual impact will be horrendous if it is done in one go.

It will take years for the place to regenerate and a very visible part of the mountain will be left scarred.

Wilding conifers are the probably single most serious environmental threat in the district.
The forest should be harvest as soon as possible to stop any further seed production and spread of wilding conifers. The financial and environmental costs (ongoing need for herbicide use) are far too high to be

acceptable.

The QLDC promotes the removal of wilding tree species and must lead by example, if it wants to be taken serious.

Kind regards

It seems prudent to reap a decent commercial return from this investment, but also reduce the seed source for wilding Douglas Firs.

I do, however, encourage a thoroughly thought out approach to the wilding issue rather than a "quick let's get rid of all conifers" approach.

I would not like to be in the situation where QLDC has the opportunity to purchase "Sticky Forest" in Wanaka as a valuable recreational asset, only to be stymied because Council "doesn't do pine trees".

Food for thought.

Cheers
Rachel Brown

Firstly this is to state that I am a member of the WCG Executive. However this submission is in my own name and covers additional arguments for the removal of the forest.

1. The WCG as well as carrying out funded removal of Wilding pines is spending very considerable time persuading Landowners to financially help with the removal of Wildings. This covers Wilding species used as shelter belts , small plantations , feature planted trees and wind dispersed trees. Some landowners such as Real Journeys Ltd (Walter Peak) , Closeburn and Soho Properties are making very large and commendable efforts at quite considerable cost to themselves. It therefore becomes very disheartening if Council are not felling the forest for their part and this may cause some Landownets to effectively say "why us when Council are allowing a prime seed source to remain ?"

2. It is apparent that with a concerted effort the battle against Wilding Pines can be won and the WCG strategy is based around this. However the battle is very time dependant and if we are not on top of the problem in the next ten years the battle could well be irretrievably lost. Allowing the forest to get to full maturity before harvest starts to go outside this window and could be a significant factor in allowing the battle to be lost. Losing the battle in the Wakatipu area will have ramifications for the whole of Centtal Otago and the McKenzie country.

Therefore for these additional reasons to the WCG submission I urge Council to accept the urgency of the

problem and remove the forest as soon as practicable.

Dick Hubbard
[redacted]

The Department of Conservation recommends that the Coronet Forest is harvested early in recognition of the considerable threat posed to the district by wilding trees, and the role the forest plays as a significant wilding seed source.

Nationally, the department maintains a high level of priority and funding for wilding control, and has a strong commitment to eradicating wildings on public conservation lands. Locally, the battle to control the spread of wildings in the Whakatipu-wai-Māori District has been going on for over 40 years.

The Department is an active partner of the Wakatipu Wilding Conifer Control Group (WCG), and delivers the implementation of all WCG wilding control operations.

The Department believes the key reasons for early harvest are:

• The threat to indigenous ecosystems posed by the Coronet Forest. This threat is recognised in the background information provided by QLDC and would be an ongoing issue if the Douglas fir were allowed to further mature.
• The benefit to the biodiversity of the district by reduction of the wilding threat. Revegetation with appropriate species will increase habitat, and encourage native flora and fauna.
• A reduction in the work programme of the WCG. Removal of wilding seed sources is crucial for success in the battle against wilding trees; if seed sources are not removed the WCG remains in control mode and will never truly make progress.
• The opportunity for QLDC to lead by example and make a significant contribution to reducing the wilding problem.
• Protection of landscape values in the district ensuring the iconic Inland Otago backdrop is still present for future generations.

Given the significant investment by the Department in control of wilding pine control work over many years we strongly urge the Council to remove this significant seed source. Leaving the Coronet Forest to mature would result in ongoing environmental and financial costs which can be avoided by early clearance.

Coronet forest has to be harvested as early as possible. It is absolute madness that the council is growing these invasive pests whilst also paying annually for them to be controlled elsewhere in the district. I cannot see any validity in the argument to keep them they HAVE to be removed as soon as possible.

Very hard to make a call on what the right thing to do is. I have spend days cutting wilding pines and I'm a member of the WRC.

The cost of the Wilding Pine Control and the damage done suggests we cut the forrest down asap.

It should have never been planted in the first place and one doesn't feel that the assest was managed right. However, the forest also gives WRC members the only place in the Valley to exercise their horses away from traffic or bikers.
Population/Traffic growth sees Horse Riders struggling when it comes to safe places to ride, especially when bringing on a young or less road safe horse.

We cater for all sort of sports - ratepayers money goes into sport fields, centres etc.
QLDC most recent message is that they discourage the use of tracks by horse riders.

In a perfect world we find a similar track in the district and after the 5 years (until replanting)we get the opportunity again to ride horses up this track.

Overall we can share tracks with walkers and even with bikers on some tracks that are suitable & safe to be shared.
We are only asking for one place we can be safe with kids or young horses. We are still a rural community. It is part of who we are and why we live here.

Thanks for the opportunity to send thoughts through. Best, Iris

Dear Sir(s)

Following is my submission to the QLDC regarding time of harvest for the 173 hectare Coronet Douglas-fir plantation.
Unfortunately, whether due to some obfuscation in attempting to get data from Council's property/infrastructure section, the 2015 Dennys Guild valuation did not get to me via email until late yesterday. Right on deadline for me to get this report underway. Therefore I had to rely on my own research to get facts and figures on the history of establishment and costs of management throughout the 32 years of growth. I had contacted Council's forester on 17/5/16 with requests for info. Although Briana Pringle was helpful she was unable to get her hands on the Guild Consultancy valuation report until now.
With some 40 years of forestry experience, much of it dealing with wilding conifers in the Wakatipu area, Cllr Simon Stamers-Smith believed I was qualified enough to put in a submission.

BEFORE THE QUEENSTOWN LAKES DISTRICT COUNCIL COMES TO A DECISION ON WHETHER THE CORONET PEAK PLANTATION SHOULD BE HARVESTED BEFORE MATURITY, IT SHOULD TAKE INTO ACCOUNT A NUMBER OF RELEVANT FACTORS. .

BASICALLY THESE ARE COSTS:
COSTS OF ESTABLISHMENT, ground preparation, cutting lines through scrub, spraying, tracking into area, seedling purchase

seedling purchase,
planting and blanking (replacing dying seedlings). According to the Guild valuation, establishment costs were "not relevant" in this exercise. Why not?
On contacting Dennys he thought earliest planting costs were covered by the then Government's Forestry Grant Scheme, but nowhere does it specifically say so in the report. Thus I figured I should seek some facts from organisations involved (Leithfield Nurseries, Wyndham, Mike Smith silviculture Dipton and Steve Johnson Forestry).
Seedling costs $150 p/1000 for first sites 1984-90, (Leithfield) to $250 later plantings. Johnson averaged it out to $0.23c /seedling giving a total $70,847.50. Labour costs for planting totalling $283,390 for whole area.
Stocking rate varied from 1600 to 2000 stems per hectare averaging 1667 SPH.
Ground preparation figures not available. Total.....$354,237 (to the nearest dollar)

TREATMENT COSTS: Thinning series
Carried out by Steve Johnson's silviculture crew. Price estimate (similar to Guild valuation but with added accommodation costs) first thinning to 700-800 SPH $1323 p/ha estimated (Guild report $1272)..Reduced over 170 ha to $950. Total...$161,550
Second thinning on 43 ha @1156 /ha ....Total $49,708. On 127 ha .....@ $1323 p/ha $168,021
.....Total $329,571
If the Government Grant Scheme excludes establishment The total cost so far would be $354.237 plus overheads/management

Rates are $25,000 p/a. To 32 years this totals $800,000, but is included as QLDC reserve thus not relevant.

ROADING:
Before any harvest is considered a fully formed road needs constructing to take fully laden 44 tonne logging truck and trailer units, first across paddock to entrance then to skid sites or landings. These need to be constructed to specifications on flat areas. Not easy on steep slopes.
The Guild report estimates roughly 2 kilometres on access from Malaghan Rd up to rural residential housing adjacent to the forest. Having had some experience working for Crown Forestry Resource Management in Herbert Forest I decided to contact local roading contractor Trevor Jones He estimates $30,000 for the 400 approx metres from Alan Reid road head to the forest gate which matches Guild's estimate of around $80,000 p/k. Including skid site set up within the forest the total costs could exceed $200,000.

LOGGING COSTS:

To clear fell immature stems a logging contractor would up the price as the preference is for large diameter mature trees with good volume. Most qualified contractors are paid on tonnage, or volume. As the later plantings are under half size a contractor may opt for an hourly/daily rate which can be expensive.
Dennys Guild suggests a mechanised hauler operation (I would suggest in combination with ground based crew) which means transporting heavy equipment to site. A hauler crew uses a tower sky line system with a carriage grapple operated from the cab of the hauler eliminating risk of manual breaking out. It would ideally

carriage grapple operated from the cab of the hauler eliminating risk of manual breaking out. It would ideally set up along the top of ridge moving along as the forest is cleared. A digger with grapple clears wood from the shute while another machine with a harvester (processor) head electronically sorts the logs in to grades on stacks. The ground based crew in the mean time work the easier slopes, possibly with a feller buncher traxcavator in combination with a grapple skidder. A big factor is the distance these contractors need to transport their equipment. The nearest crews of this size operate on large forestry blocks mostly along the east and southern
areas of both provinces. This can bite into net returns.

MARKETING:
This is another factor to be considered. Some of the earlier plantings could make A grade wood for the domestic market (sawmills) if harvested now. Prices have been reasonably good and appear to be steady month by month. Export prices are high but cartage to Bluff, over 200 k will cut into returns. Tapanui (Stewarts mill) is marginally nearer. So is Findlaters at Tussock Creek. Other options are the Winton mills or Luggate. Skip Johnson of Luggate is operating the mill part time but will buy in Douglas-fir when available. Much of the small end log would be down graded even if there is demand for small diameter logs.
It would be reliant on at wharf gate (AWG) export prices are offered. At least pulp grades are up to $100 p/JasM3
The problem with timber is that its a commodity product and varies from month to month. One job I was involved with in North Otago, we got a crew on to a woodlot of low volume un thinned or pruned radiata when prices were on a rise for pulp grades. two months later the prices dropped but we had to let the contractor continue on the block much to the dismay of the forest owner.
Historically prices tend to track upward in the long run. And trees have a good shelf life, to be harvested when there is an upswing

VALUATION 2015 GUILD REPORT $945,666:
This is presumedly on stumpage (standing trees).
Without overheads/management costs of $16,151, but including listed costs as above and unknown costs such as contractors and cartage costs the net returns from this forest would, in my opinion hardly make it into a six figure profit

The pressure appears to be coming from wilding conifer control groups. From my own experience with wilding tree invasion much of the outlier spreading into the Harris Mountains back country has come from a number of sources. Particularly Douglas-fir. Old mature seed trees abound in the Shotover, Long Gully, the Billie Creek settlement up the Arrow River and many areas within the Wakatipu basin. Shelter belts, small woodlots, as well as plantations over on the Wanaka side. The Coronet forest (as observed by Guild) is in a stable wind area with the only outlier regeneration I had observed was over the ridge into Bush Creek. Goats had made a good job of grazing on the small trees. Many years back I had shot deer and goats above the bush line, but not long ago up Brow Peak I noticed very little spread on the ridges.
Containment advocated by corporate foresters and run holders is stock grazing (sheep) on the boundaries, fertilised pasture (Ledgard ex Scion Research), regular spot spraying and cutting or pulling out seedlings.

Cost of control should be allocated from net returns, which would be worth much more when trees mature. There could be an extra $500,000 in net returns within 12 years .

THUS ON THIS BASIS I WOULD RECOMMEND THE FOREST BE LEFT TO GROW TO MATURITY, AS DISCUSSED WITH OTHER PROFESSIONAL FORESTERS.
The first plantings and the last could be dealt in one logging operation as the later plantings will have put on considerable growth in 15-20 years. Or harvested in three lots, 1984-86, 1987-90, 1991-96 plantings at 5 and 10 year intervals for maximum returns. PARTICULARLY WHEN PRICES ARE HIGH

Jim Childerstone Forest Services (semi retired)
[redacted]

1. Seeking forestry feedback from the public, who have been denied the benefit of the facts, is disingenuous at best, and outright dishonest at worst. Here's why. QLDC have heid their discussions in secret, citing "commercial sensitivity" which all too often is code for "Let's keep the public out of discussions that we, the elected officials, deem is inappropriate for the public to be involved with." Because of your exclusion of the public, you can only ask for an uninfonned view. That is unfair to all ratepayers.
2. By advertising in both the ODT and local news outlets promoting the destrnction of forest for the dubious benefit of the alternatives (scrappy cover of an assorted mix of non natives that cannot absorb excess water run off, nor prevent erosion, nor work as a carbon sink) is a blatant exercise in Council propaganda, which has been funded by ratepayers. This is wrong. You have sought to steer (via funding provided to the conifer control crowd) the public into vour preferred position by 12romoting your 12artisan objectives, without first inviting a discourse for a contrary view. (I attach - as part of this submission - an advertising sheet which you have paid for via ratepayer monies - which depicts a "before" and "after" view for wilding pines. The pines are shown in photo-shopped grey (not green) as being unpleasant, whilst the adjacent vista is deemed to be attractive. It is an emotive advert designed to obfuscate, rather than clarify. In one word. Propaganda.
3. The reports that you have commissioned - some over 100 pages - have been an academic exercise that is very long on length, and short on relevance. The average ratepayer has little time to read, let alone digest, theses tomes of statistical detritus and opinionated interpretation. 1 suspect that most councilors will have confined their read to the conclusion page. To read all the QLDC reports received in any ollt. month would require a 24 hours a day read, which is humanly impossible. In that respect they have my sympathy. These reports are a further waste of ratepayer monies and fall short in some key areas The question of erosion is not covered, the effects_ of another 1999 flood on landscapes is not covered (note the hillside above Frankton road caused closure for over a week, houses were demolished, and pines were planted above the BP station as part of a hill stabilization program. The conifer crowd has since had them removed.), the fire hazard of leaving dead trees in place is not covered, and the cost/benefit ratio of harvest versus maturity is hopelessly flawed.
4. Every year that these trees mature, they now begin to p:e:r add wood volume exponentially, and in so

4. Every year that these trees mature, they now begin to put on wood volume exponentially, and in so doing add considerable value to their future harvest. You cannot know what the harvest value will be in 20 years time. No one can, and certainly not the "experts" that you have commissioned to advise you thus. Did these same expe1is predict the dairy price collapse? The rise in tourism? The unexpected return of expat Kiwis? No, they did not. So what makes you think that they can predict wood prices 20 years from now. They cannot!

5. You talk of replacing trees with a mix of deciduous non natives. Why? For the 'feel good' factor? They might look pretty in autumn (unlike the ones destroyed above the roaring meg power station which are now an environmental eyesore), but they will not fulfill your Kyoto sink requirement under the pre 1990 plantings. For one thing, their volume is inadequate. Either way, the law requires you to replant, within a relatively short space oftime, a carbon saving equivalent.

6. Douglas Firs (aka Oregon) seed sources do indeed spread. You might have noticed that pinus radiata have a significantly lower spread rate, and at a much lower altitude than Oregon. This ought to be a species to consider when eventually replacing the Oregon. Other compelling reasons include:

a) Pin us radiata is a sustainable resource crop with a much shorter rotation than Oregon, and is in high demand as a framing timber.

b) It helps deepen our economic base with a non tourist related funding source.

c) Hill side erosion is contained.

d) Nutrient runoff into lakes and rivers is contained. (Think eutrophication of Lake Hayes.)

e) If you remove the Oregon trees currently in place you will need to spray new seedlings for years to come1 which is a quite unnecessary additional cost burden on the ratepayer.

f) Your spray costs on wilding pine spread prevention is also inaccurate because you have not split out costs amongst other seed sources. Notably, that around the skyline area above town, and also an adjacent Coronet plantation. This would have the effect of favoring the retention of the current plantation. I am completely opposed to a self appointed anti conifer control crowd hi jacking the districts flora and fauna simply because they don't like evergreen trees. There is a strong argument for a contrary view, which is not being presented, because Council has been captured by an over active minority group of conifer police who want to brovm the district.

My advice to the Council is to continue to hold the resource till nearer the plantations maturity. At that time you can choose a market maximum. Trees have the advantage that their harvest can be postponed (whilst adding value via volume growth) should the market be unfavorable at a particular time.

As an owner of a tree plantation. I believe I have more experience than your academic consultants on these matters. And that probably includes councilors as well.

This district could benefit from a wider economic base, and green conifers will deliver that whilst simultaneously contributing to our Kyoto obligations, and the recent Paris accord on climate change. They are also good for New Zealand's 'clean green' image. In this respect, is Council a believer in green carbon sinks, or do they only pay lip service to our obligations?

Submitter:

Michael Ramsay

[redacted]

[redacted]

[redacted]

Please find below my submission:

Submission against Proposed Early Harvest of Coronet Forest

I oppose the early harvest of Coronet Forest because the current proposal has a number of significant flaws and issues that need to be properly considered before any decision is made. The key issues are:

1. Loss on Harvest

• No details of the financial model have been released.
• The conservative model predicts a loss of $1.2m.
• As a council, surely such endeavours should always use the conservative model.
• How will the loss be funded?
• Would this money not be better spent on wilding control?

2. Value of Logs

• Mention is made that log prices are currently high, however, prices are cyclical and if prices are at a peak now it is clear from historical data that they will be lower over the next 3 - 5 years, before rising again.
• Trees typically double their volume in the last 5 - 10 years before harvest.
• Trees gain their value in the last 10 - 15 years when they become suitable for timber.
• To harvest early we are therefore losing both opportunities?
• More information is required on the proposed use for immature trees but the conclusion that the yield at immaturity (with lower tonnage and lower value) would be comparable with the yield at maturity seems to contradict financial reality.

3. Replanting Plans

• No real details have been proposed on felling or re-planting programmes. A three-year waiting period is, however, proposed during which it is assumed the cleared ones will be sprayed and dead.
• Commercial forests typically re-plant within 1 year.
• Replanting options should consider alternative plantation forests that don't promote wilding spread such as pinus radiata or macrocarpa.
• Replanting options need to consider a mixture of faster and slower growing species.
• No mention is made of how the hillside would be cleared or slash disposed ?

4. Recreational Use

• No plans are presented for recreational uses of the existing or new forest.

5. Harvest Technology and Safety

• Harvesting forests is still a very dangerous activity. The Council, as Owner, will be responsible. No details are provided on how this risk and resulting liability of council officers, and councillors(?) will be mitigated.
• Newer harvesting technology is slowly being introduced in New Zealand after widespread use overseas. Delaying the harvest will reduce Health & Safety risks and give opportunity for more efficient harvesting technology not currently available.

6. Carbon Credits

• No details are provided of whether the Council has joined the NZETS carbon credits and how the Council have used any NZU's or the value attributed to them.
• No details are provided on the financial impact of the 20% post 1990 forest.

7. Wilding Control

• Partial felling and replacement of fringe trees is not discussed as an option to reduce wilding trees even though it has been proven to have some effect.
• Wilding control costs related to this forest are surely impossible to assess and the estimate of $2.9m cost for just this forest compared with a current total spend for the whole district of $1.2m is hard to correlate.
• Re-stocking of surrounding areas, and re-establishment of goat populations would have a minimal cost, but high impact on wilding control. No consideration would appear to be given to this or other alternative wilding control measures.

8. Tourism Impact

• No consideration has been given to the impact on the region's lifeblood - tourism.
• Reduced recreational opportunities:
˜ mountain-biking
˜ horse riding
˜ parapenting
˜ hang gliding
• Impacts on views:
˜ views from Coronet Peak and Coronet Peak Road
˜ view from Malaghans Road being main tourism route for many of the hundreds of thousands of tourists that visit each year.
˜ view from aircraft landing at the airport
˜ view from the Crown Range.
• Heavier traffic created on main tourist route

• Negative impact on "clean, green" image.

9. Traffic Impact

• No study of traffic impacts has been presented as the log transport route is assumed to include:
˜ Malaghans Road
˜ Hunter Road or Lower Shotover Road
˜ Shotover Bridge
˜ Kawarau Bridge
˜ SH6 towards Five Rivers (main route to Milford)
• Surely any harvest should be delayed until the new Kawarau Bridge is completed as logs are assumed to be transported to Bluff.
• Potential risk to cyclists that use Malaghans Road, Hunter Road and the main cycle trail from Arrowtown to Queenstown that will cross the route.
• Potential risks to residents commuting from Arrowtown to Queenstown - very busy road.
• High risk to tourist traffic - inexperienced drivers conflicting with large trucks with limited visibility.

10. Management Plan and Consultation

• No management plan is available on Council website or when a call was made to Council offices.
• No apparent update of plan prior to December 2012 as required by District Plan.
• Has formal consultation commenced as required by the District Plan?

Regards,
Peter Soundy

Peak Projects International Ltd
[redacted]

We offer nine factors for the immediate removal of the forest.
1. The wilding spread. WCG receives constant reminders that Saw Pit gulley and the downwind area beyond the forest is inundated with small to medium sized wildings. Informed community people know the problem while people driving past only see the forest.

2. The cost factor. After seven years of investing in control work WCG knows that the area of trees always extends beyond the original costed area. Ground crews and helicopter pilots constantly report more trees beyond the planned control spots.
3. The required repeat controls. . If the forest is left to mature, say another 15 plus years especially for the trees at the top of the forest which will mature later, the control areas will require spraying at least twice and another two times after the forest's removal e.g residual seed sitting in the ground and then germinating.
4. The math factor. While control costs of D-fir are sometimes limited to a three km spread the reality is that light windblown seed from the forest is spreading well beyond estimated boundaries.
5. The Arrowtown embankment. Forest seed rains onto the Arrowtown embankment. Green conifers are already outgrowing the autumn coloured trees. AVA is deeply concerned at the conifer influx.
6. Moral factor. As guardian of Wakatipu's ONL Council can hardly recommend a by-law banning the planting of wilding species while at the same time owning the largest forest of trees with windblown potential. Tourism is landscape dependant, lose the unique vistas and a Wakatipu drawcard will be lost
7. The NZ wide awareness factor. National, Regional, Councils and communities are taking action on wildings. Wilding control is predicted to be in the Budget, ORC is funding and promoting wilding control. QLDC wisely budgets wilding work. Our communitiyrecognises the problem. Now is the time to decide.
8. The NZ Wilding Conifer Strategy reinforces the "good neighbour "policy. Landowners it states ''fail to be responsible neighbours'' when seed blows onto the neighbours land.
9. The scorched land factor. Every time land is sprayed the woody native species die. The land behind the forest will require four sprayings only stunted tussock and browntop will survive.

Now is the time to decide

MILLBROOK
QUEENSTOWN : NEW ZEALAND

12 May 2016

Queenstown Lakes District Council
Private Bag 50072
Queenstown 9348

ATTENTION: **Coronet Forest Submissions Officer**

Dear Sir or Madam

Harvesting of the Coronet Forest

In 2011 QLDC consulted on a change to the Coronet Forest Designation. Through that consultation Millbrook made submissions as it was concerned with narrowing down a Harvest date and a re-vegetation programme for the harvested area. One outcome of that process was that QLDC were required to consult with Millbrook at least six months prior to harvest. We are surprised that we have therefore not been contacted directly by QLDC for this current round of consultation regarding early harvest of this forest. Instead we have learned of this via social media by chance and had we not we may very well have missed the deadline for submissions.

I attach some correspondence from August 2011 to refresh your memory of what was agreed at that time.

Millbrook is still of the view that this forest should be Harvested at maturity and not before. This is even more so now given that we have just underwritten the NZ Golf Open for five years which has international television coverage that pans around the faces of Coronet Peak from time to time as a back drop to the golfing activities.

We note in the consultation document a suggested three wait after harvesting to replant however this was recorded as two years in the agreed designation change from 2011.

Yours faithfully
Millbrook Country Club Limited

Ben O'Malley
Director - Property & Development Manager

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2 August 2011

[redacted]

Dear Ben

QLDC CORONET FOREST PROPOSED DESIGNATION

Following our discussions with Briana at QLDC regarding the Notice of Requirement for designating Coronet Forest, I can confirm the following:

1. Future consultation

QDLC will consult with Millbrook *"at least six months before any harvesting operation is to commence"*. Harvesting operations for Coronet Forest will be detailed in an Outline Plan that is required by the designation.

The designation also relies on the management plan for Coronet Forest (clause 4 at page 2 of the updated Notice of Requirement, attached to this letter; the current management for Coronet Forest is also attached to this letter). QLDC will consult with Millbrook when the management plan for Coronet Forest is being updated.

Millbrook therefore has two opportunities for continued input and involvement under the designation: a) harvesting operations, and b) the on-going management of Coronet Forest.

2. Boundary of designation

The boundary of the designation now follows the Coronet Forest, as attached to this letter.

3. harvesting date

No harvesting date is set in the designation; however, Millbrook will be consulted when the management plan is to be updated. The current management plan has the following dates:

"Production thinning is likely to take place at ages 30 and 38, and clearfelling is expected to take place at age 45 or thereabouts."

QLDC is currently undertaking some thinning. The first stands of Douglas Fir were planted in 1984 so "age 45" would be 2029 at the earliest. If QDLC wants to bring this date forward it will have to change the management plan and/or announce an impending harvesting operation via the Outline Plan – both of these processes require consultation with Millbrook.

4. Re-vegetation

Re-vegetation following harvesting *"will occur as soon as practicable and no later than 2 years after completion of the harvesting operation"* (page 2 Notice of Requirement). These are the words you suggested.

5. Hours of operation

Hours of operation for harvesting will be *"the working week Mon – Fri 8am till 5pm"*. Briana advises that hours of operation will be included in the Outline Plan.

6. Tracking and windrows

Briana advises that *"tracking will be kept to a minimum; all tracking will be carried out in accordance with the Best Management Practices under the New Zealand Code of Practice for plantation Forestry".*

5. Wilding control

The Notice of Requirement for the designation states *"Wilding regeneration removed within 2 years of milling at each mill site; Control of Wilding spread from the Coronet forest on a five year rotation* (5b, page 5 of the Notice of Requirement).

Briana advises that *"the technique for controlling wildings will depend on the type of spread and the area. New tools are being developed all the time and QLDC works with other wilding groups around the South Island looking at trials and the best techniques to use. The type of control required will depend on the spread. Wilding control is addressed each year as budgets are set. If there is a requirement for control in a particular area then the appropriate operation is planned for the following year. The control work may be more frequent than a five year period, depending on the requirement and area. Additional wilding control may be programmed though the Wakatipu Wilding Conifer Control Group Inc (WCG) or by adjacent land owners."*

Conclusion

I am satisfied that we have reached a position that Millbrook can now be comfortable with. While there is no harvesting date set in the designation, there are two opportunities for Millbrook to be involved in setting a date (or dates, as I understand QLDC does not intend to clearfell the entire forest at once). You can also talk informally to Briana outside the formal consultation times.

If you are also satisfied with the outcome of these negotiations (and compromises) then I will confirm in writing to Briana that Millbrook no longer wishes to attend a hearing. I have attached a draft letter to Briana for you to review.

Yours sincerely

[redacted]orestry

Briana Pringle
District Forester, Community Services Team
Queenstown Lakes District Council
Private Bag 50072
QUEENSTOWN

Dear Briana

CORONET FOREST PROPOSED DESIGNATION

Following our discussions on behalf of Millbrook Country Club regarding the Notice of Requirement for designating Coronet Forest, we can confirm the following:

1. Future consultation
Millbrook is satisfied with the two opportunities for continued input and involvement under the designation: a) harvesting operations via the Outline Plan; and b) the on-going management of Coronet Forest via the management plan updates.

2. Boundary of designation
Millbrook is satisfied with the boundary of the designation now following the boundary of Coronet Forest, as requested.

3. Harvesting date
No harvesting date is set in the designation as requested by Millbrook. The current management plan for Coronet Forest has the following date: *"Production thinning is likely to take place at ages 30 and 38, and clearfelling is expected to take place at age 45 or thereabouts."*

We understand that QLDC is currently undertaking some thinning. The first stands of Douglas Fir were planted in 1984 so "age 45" would be 2029 at the earliest. If QDLC wants to bring this date forward it will have to change the management plan and/or announce an impending harvesting operation via the Outline Plan – both of these processes require consultation with Millbrook. Millbrook is satisfied with this compromise.

4. Re-vegetation
Millbrook is satisfied with the requested rewording of this clause to *"will occur as soon as practicable and no later than 2 years after completion of the harvesting operation"*.

5. Hours of operation
You have advised that hours of operation for harvesting will be *"the working week Mon – Fri 8am till 5pm"* and will be included in the Outline Plan. Millbrook is satisfied with that.

6. Tracking and windrows
You have advised that *"tracking will be kept to a minimum; all tracking will be carried out in accordance with the Best Management Practices under the New Zealand Code of Practice for plantation Forestry".* Millbrook is satisfied with that.

7. Wilding control
The Notice of Requirement for the designation states *"Wilding regeneration removed within 2 years of milling at each mill site; Control of Wilding spread from the Coronet forest on a five year rotation* (5b, page 5 of the Notice of Requirement). Millbrook is satisfied with that.

Conclusion
Millbrook is now comfortable with the outcome of these discussions and no longer wishes to attend a hearing.

Please contact me if you have any questions on 450 0009 or rosalind@jea.co.nz.

Yours sincerely

Rosalind Groves
John Edmonds & Associates Ltd

Notice of Requirement

1. **The site locations:**

I. **Ben Lomond Reserve:** Lake Esplanade, Queenstown Sec 1 SO 24350 Sec 106 Pt Sec105,107,109 – 110 BLK XX Shotover SD Lot 3 DP 19021 and Sec 1 SO 24322. Sec 1 SO 24832p. **Designation 382 (additional to the current designation):** Recreational Reserve/Forestry

II. **Queenstown Hill Reserve**: Commonage Reserve, Queenstown Hill, Part Section 104, Block XX, Shotover SD. **Designation 383(additional to current designation):** Recreational Reserve/Forestry

III. **Coronet Forest:** Coronet Forest Lots 1-2 DP 21922 Lot 1 DP 24277 Sec 24 BLK XVII Sec 23 BLK XVIII Shotover SD. **Designation 384 (new designation):** Forestry

2. **The nature of the proposed work:**

Forestry - Means the use of land for the purpose of planting, tending, managing and harvesting of trees for timber or wood production.

3. **The nature of the proposed restrictions that would apply**

1. All forestry operations will be carried out using Best Management Practices under the New Zealand Environmental Code of Practise for Plantation Forestry. Second Edition May 2008. (http://www.fitec.org.nz/Resources/NZ-Environmental-Code-of-Practice-for-Plantation-Forestry/)

2. Any outline plan should include:
- Location of logging
- Duration
- Method of logging
- Extent of existing and new tracking work
- Assessment of natural hazards within the harvesting area, identifying the effects on and off site.
- Mitigation on-site and off-site of the natural hazards identified
- Contingency plans to reduce effects of hazards should the mitigation not be effective
- Long term management of slope stability, where appropriate

3. QLDC will consult with the following parties who are likely to be directly adversely impacted by harvesting operations, these parties will be consulted at least one month before any harvesting operation is due to commence, the following parties will also be consulted when management plans are updated:

Ben Lomond Forest:
- DOC
- Skyline Enterprises
- Queenstown Mountain Bike Club

- Compaction of soils – repeated use of heavy machinery on wet soils can result in compaction. The operation will be planned at times of the year when heavy soil compaction can be eliminated. If main tracks are compacted after logging, they should be ripped to reduce surface runoff.

2. **Scenic and landscape**

- The sites are within outstanding natural landscape Wakatipu and work needs to be planned to minimise impact on landscape values
- Gradual changes in the landscape can be accepted as part of a slowly changing landscape.
- The harvest area should be re-vegetated within 2 years of the operation.
- Any wilding regeneration at milled sites will be killed within 2 years of the operation.
- All trees will be removed in a coupe area, no singular trees will be left as this highlights an incomplete operation.
- Use Best Management practises to avoid damage to indigenous vegetation.
- Wilding species will be removed from remnant stands of beech forest including within 20m of their drip line.
- Opportunities will be taken to plant areas adjacent to these remnants with beech with priority areas those that link remnants.
- Opportunities will be taken to use indigenous species at to establish permanent non linear forest shrubland edges to integrate forests into the outstanding natural landscape.
- In visually sensitive areas, ground based systems will be used if possible to create minimal soil disturbance.

3. **Cultural - Historic and Heritage Values**

Historic and heritage vales are defined as natural and physical resources that contribute to an understanding and appreciation of New Zealand's history and cultures:

1. Historic sites, structures, places and areas
2. Archaeological sites
3. Sites of significance to Maori, including wahi tapu
4. Surroundings associated with the natural and physical resources

- All forestry areas should be checked to make sure that they are not a historic or heritage site, this can be checked with the district council.
- If the harvesting/Planting crew comes across anything that leads them to believe it could be a historic or heritage site that may be of significance they must stop work in that area and the appropriate management staff should be contacted.

4. **Scientific Values**

Scientific values are of interest to the scientific community, they can be rare, unique, representative or illustrative of natural processes or not readily found elsewhere.

- If such features are found the correct managerial staff should be alerted.

5. **Ecological Values**

Indigenous vegetation is important, any indigenous vegetation neighbouring the harvest area must not be damaged.

- The harvesting crew must make reasonable effort to avoid damage to restricted areas

b) **Coronet Forest**

The Coronet Forest was planted on Arrowtown Endowment land in 1984 till 1996, the forest is part owned by QLDC (75%) and CODC (25%), the management of the forest is administered by the Lakes Combined Afforestation Committee which is made up of staff and councillors from both councils.

The Management objective in the 'Management Plan for Coronet Forest, Arrowtown 2001' is:

To grow a crop of Douglas fir for maximum profitability within the constraints of:

- Good forestry practice
- Sustainable land use, and
- Respecting the wider social objectives (of landscape and public use) of the Queenstown Lakes District Council as contained within the District Plan.

The designation will allow for:

- the complete replacement of Douglas fir with non spreading species at the end of the first rotation
- Wilding regeneration removed within 2 years of milling at each mill site
- Control of Wilding spread from the Coronet forest on a five year rotation
- for native trees to be considered as a crop in rotation two
- Permanent non linear edge plantings to be indigenous species to better achieve the integration of the forest into the outstanding natural landscape.

6. **Why the work and designation are reasonably necessary for achieving the objectives of the requiring authority:**

a) **Ben Lomond and Queenstown Hill Forests**

The Ben Lomond and Queenstown Hill reserves have been recognised as forests in two notified reserve management plans and should therefore be recognised under the district plan as a forestry area:

- **The Ben Lomond and Queenstown Hill Reserve Management Plan -**

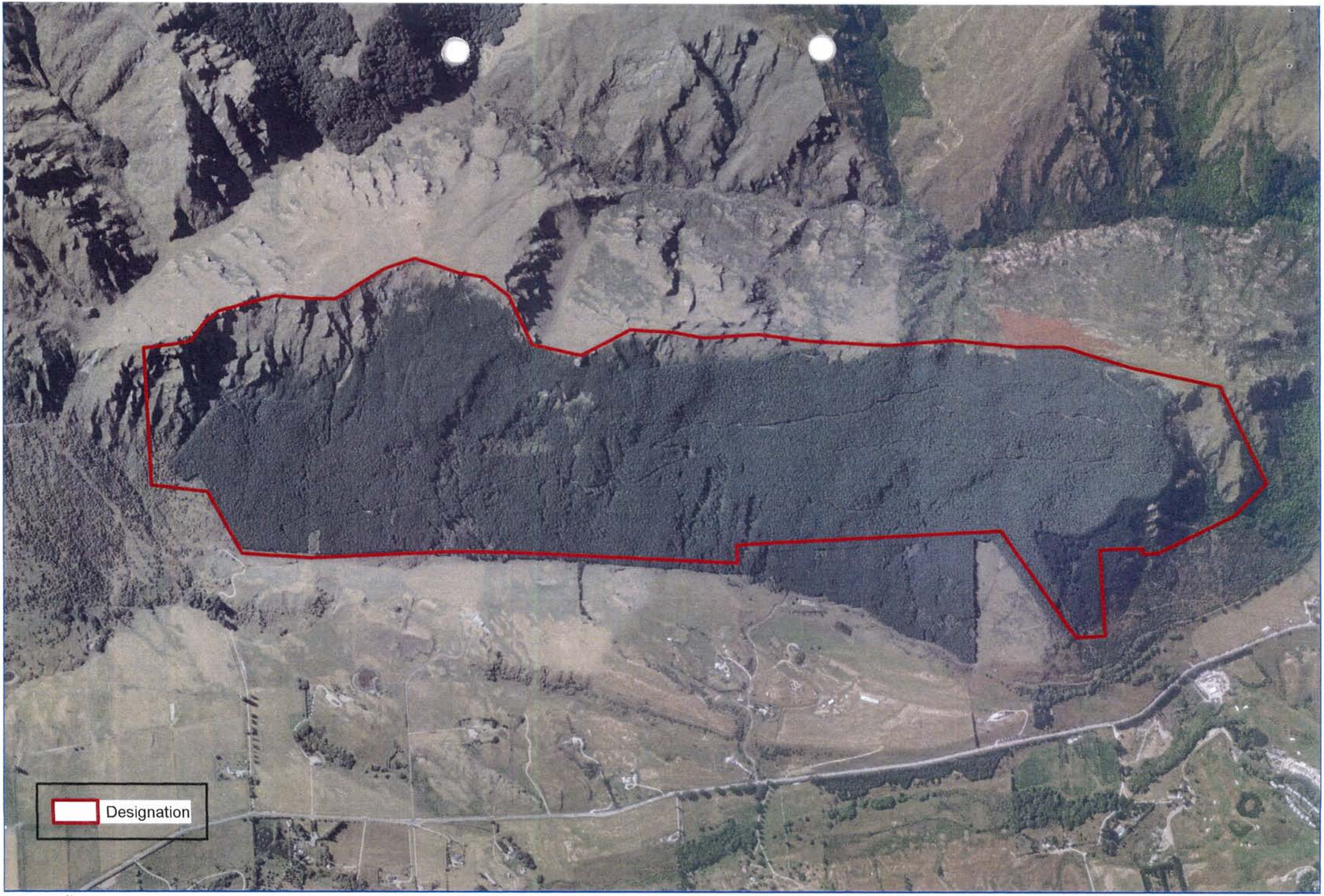
The forests contain some of the fastest growing Douglas fir in New Zealand so there is an opportunity to harvest timber in a sustainable manner to generate revenue for the management of the districts parks and reserves and wilding conifer control.

Objectives of the management plan:

1. Management of exotic forest to recover merchantable timber where amenity can be improved and recreational opportunities and indigenous vegetation enhanced.
2. To ensure the logging operations minimise impacts on landscape and recreation values and existing facilities.

10.1.1 Production Forest – Zone is managed to maximise production values while maintaining continuous canopy cover to ensure a forest backdrop to Queenstown is achieved.

- **The Ben Lomond and Queenstown Hill Forestry Plan**



Coronet Forest Designation Area

C. 71 Designation #373, #374 and #375 – Forestry Purposes (RM100722)

(i) The purpose of the designation is to enable the Queenstown Lakes District Council ("the Council") to carry out forestry operations within the designated forestry reserves. "Forestry operations" means the use of the land primarily for the purpose of planting, tending, managing and harvesting of trees for timber or wood production.

(ii) All forestry operations will be carried out using best management practices under the New Zealand Environmental Code of Practice for Plantation Forestry, Second Edition, May 2008; together with any subsequent updates or editions. (http://www.fitec.org.nz/Resources/NZ-Environmental-Code-of-Practice-for-Plantation-Forestry/)

(iii) All forestry operations must comply with the management policies and programmes set out in the following current plans:

- *Ben Lomond and Queenstown Hill Reserve Management Plan* adopted 3 August 2005;
- *Ben Lomond and Queenstown Hill Forestry Plan* adopted March 2006; and
- *Coronet Forest Management Plan* dated 26 July 2001;

or any updated versions of these plans adopted by the Queenstown Lakes District Council in accordance with condition (iv) below.

(iv) The current *Ben Lomond and Queenstown Hill Forestry Plan* and the *Coronet Forest Management Plan* ("the Forest Plans") shall be reviewed and updated by 31 December 2012, and thereafter every 5 years, and shall address the following matters:

(a) Policies and, where applicable, proposed programmes in relation to the re-establishment and/or re-vegetation of production forest, together with areas to be retired from production forestry following harvesting operations. The re-establishment and/or re-vegetation plans shall include the following (as applicable):

- Details of any production forest re-establishment programmes; including plant schedules, density of planting and grades of plants by botanical name.
- Areas of land to be retired from production forest following harvesting operations, together with the proposed future re-vegetation (including plant schedules and botanical names) and maintenance programmes.
- Details of all indigenous species planting programmes, where applicable. Indigenous species should be planted, inter alia, to establish permanent non-linear forest and shrub land margins of no less than 20m in width to integrate production forest into the outstanding natural landscape, and to limit wilding spread. The botanical names of species, location and extent of planting to achieve landscape integration (where required), together with proposed maintenance programmes, should be included.
- Proposed control of any wilding regeneration following harvesting operations, both within re-established or re-vegetated areas and in proximity to remnant stands of existing indigenous Beech forest. The Forestry Plans shall provide that any wilding generation is to be eradicated within two years of harvesting.
- The Forestry Plans shall provide that re-establishment or re-vegetation of harvested areas will occur as soon as practicable and no later than two years after the completion of harvesting operations.

(b) Areas where additional indigenous Beech species are to be planted (adjacent to Beech remnants) with priority in those areas that will link Beech remnants. Planting programmes for the establishment of indigenous Beech species shall run concurrently with harvesting programmes.

(c) Details of indigenous eco-systems to be protected and extended within the Ben Lomond reserve, including One Mile Creek.

(d) Policies in relation to the impact and requirements of the New Zealand Emissions Trading Scheme and subsequent implications for the longer term management of the production and non-production forests.

All updates of the Forestry Plans shall be subject to consultation with the community using the Special Consultative Procedure set out in section 83 of the Local Government Act 2002 before adoption by the Council.

(v) No forestry harvesting operations will be undertaken within 30m of the Skyline or Ziptrek leased areas unless the prior consent of the affected leaseholder(s) has been obtained.
**Note: As lease operations expand or reduce, the 30 metre buffer zone will be adjusted accordingly to include/exclude the lease area from harvesting operations*

(vi) The Requiring Authority shall consult with the following parties that may be potentially adversely affected by harvesting operations. These parties must be consulted at least one month prior to an Outline Plan being submitted in relation to the particular forest:

Ben Lomond Forest

- Department of Conservation;
- Skyline Enterprises Limited*;
- Queenstown Mountain Bike Club;
- Wakatipu Trails Trust;
- ZJV (NZ) Limited (Ziptrek);*
- Ministry of Education;*
- Queenstown Primary School Board of Trustees;*
- Wakatipu High School Board of Trustees;*
- Vertigo Bikes;
- Kiwi Birdlife Park Limited*; and
- Any other lease holders within the designated area.

**Note: Consultation with those parties identified by * above shall be submitted to the consenting authority as part of any Outline Plan approval*.

Queenstown Hill Forest

- Department of Conservation; and
- Any other lease holders within the designated area.

Coronet Forest

- Department of Conservation;
- Millbrook Country Club Limited;
- Arrowtown Village Association; and
- Any other lease holders within the designated area.

(vii) An Outline Plan is required for the harvesting of trees for timber or wood production prior to any harvesting taking place. The Outline Plan shall be prepared in accordance with the requirements of the New Zealand Environmental Code of Practice for Plantation Forestry (as defined in condition (ii) above) and shall address the following matters:

(viii) A **site plan** shall be prepared, defining:

- site and boundaries of the forestry designation;
- location and extent of existing beech remnants or other indigenous forest;
- location and extent of heritage or cultural sites to be protected;
- land contours and features;
- the location and extent of proposed harvesting and associated works, including proposed structures;
- the staging and stage boundaries of proposed harvesting;
- extent of replanting for production forest, for permanent forest margin 'buffer' planting, and all areas of indigenous planting;

- areas of marginal forestry to be retired;

(ix) The extent and location of existing and new tracking works required for the duration of the works shall be outlined;

(x) A re-establishment and/or re-vegetation programme for the harvested area in accordance with the relevant Forestry Plan shall be included. The programme should contain details of the matters set out in condition (iv) above where applicable (by reference to the relevant Forestry Plan) and shall comply with all of the requirements set out in that condition.

(xi) Forestry operations shall be undertaken in accordance with the Harvesting Hazard Management document (attached as Appendix 1 to these conditions). An assessment of natural hazards within the harvesting area shall be undertaken to identify the effects of natural hazards on and off site and the Outline Plan shall provide details of the following matters:

- Mitigation on-site and off-site of the natural hazards identified;
- Contingency plans to reduce adverse effects of hazards should the proposed mitigation not be effective;
- Long term management of slope stability, where appropriate.

(xii) The Outline Plan shall have regard to the relevant objectives and policies of the Queenstown Lakes District Council District Plan.

(xiii) Any structures necessary for forestry operations shall be located so as not to break the line or form of any ridges, hills or prominent slopes. Structures shall be located so as to be reasonably difficult to see from surrounding public locations and shall be coloured in dark recessive colours, within the tones of grey, green or brown with a light reflectivity value less than 36%, and shall appear recessive within the landscape. All structures and traces of their presence shall be removed on completion of silvicultural operations or harvesting as applicable.

(xiv) Harvesting should occur only along natural boundaries (such as the edges of stream beds or stands of indigenous vegetation), and should endeavour to avoid the creation of arbitrary lines in the landscape which do not harmonise with underlying features or topography. Harvesting in geometric blocks should be avoided where possible.

(xv) The method of harvesting should minimise any adverse effects on visual amenity and soil disturbance. To avoid adverse effects of any temporary or permanent roads or other earthworks on the landscape, helicopters should be used for harvesting operations where practicable. Otherwise earthworks should be undertaken in a way that minimises cut and fill. Batters must be rehabilitated as soon as possible and no less than 6 months following harvesting operations. All earthworks are to be restored to original ground level as soon as harvesting has been completed and re-vegetated immediately.

MANAGEMENT PLAN FOR

CORONET FOREST, ARROWTOWN

Prepared 26/7/01

Prepared for: ***Queenstown Lakes District Council and***
Central Otago District Council

Prepared by: ***Dennys Guild***
Registered Forestry Consultant
Wrightson Forestry Services
Private Bag 1966
Dunedin

1.0 SUMMARY

This management plan describes the silvicultural and management proposals recommended for this forest near Arrowtown. The forest has been planted entirely in Douglas fir, and covers a gross area of some 413 hectares, and a net stocked area estimated at 200 hectares.

The land is the relatively steep eastern face of a northerly ridge originating from Coronet Peak.

This management plan has been prepared by Wrightson Forestry Services in response to a request by the Lakes Combined Afforestation Committee of the Central Otago District Council and the Queenstown Lakes District Council, to provide a detailed plan for the establishment and management of a commercial forestry crop on this property.

1.1 PERIOD OF THE PLAN

This plan has been prepared to cover a maximum period of 28 years, or until the oldest age class is ready for harvesting. Nevertheless, there should be regular review of the plan in order to keep it up to date. It is recommended that the plan should be reviewed every 5 years at the least, and that an annual report be prepared to report on achievements and deviations from the plan.

Prescription: ***Provide annual reports on the achievements and deviations from the plan. These should be as at 30 June each year to coincide with the Council's financial reporting year.***

Prescription: ***Review the plan every 5 years or sooner, the first review being due on or before 1 July 2006.***

1.2 DISCLAIMER

Wrightson Forestry Services has compiled this plan and its associated financial analysis for the Lakes Combined Afforestation Committee. Much of the information used to calculate both costs and revenues is only our best estimate of costs and revenues which will be incurred or earned maybe years in the future. These estimates are based on industry averages and our current knowledge, and we cannot guarantee their accuracy in years to come. Actual returns from this investment may be greater or lesser than the returns calculated in this plan due to events beyond our control.

2.0 BACKGROUND

2.1 LOCATION

Coronet Forest is located on the lower slopes of Coronet Peak close to Arrowtown. It is accessed by way of a metalled public road off Malaghans Road. The forest falls to a southerly aspect, and is highly visible from the 'back' road from Arrowtown to Queenstown, from Millbrook Resort, from Dalefield, and from a number of locations in the Wakatipu Basin. See Map 1.

2.2 LEGAL DESCRIPTION

The legal description of the land on which the forest is growing is as follows:

Lot 1 DP 24277 and Lots 1 and 2 DP 21922 and Section 24 Block XVII and Section 23 Block XVIII Shotover Survey District, comprised within Certificate of Title 16B/451 of the Otago Registry.

The registered owner of the property is the Queenstown Lakes District Council. The total area of the land is 413.4542 hectares, but the stocked area is less than 50% of this. See Map 2.

The land is subject to a number of Acts, and encumbrances, but the most important of these is the encumbrance by Lease 617100 to the Central Otago District Council and the Queenstown Lakes District Council for a term of 60 years from 1 April 1983.

The land is freehold land owned by the Arrowtown Borough Council, but leased until 31 March 2043 to Lake County Council, Alexandra Borough Council, Queenstown Borough Council, and Arrowtown Borough Council as joint Lessees. Under the restructuring of local authorities, three of the above have been absorbed into the Queenstown Lakes District Council, and the Alexandra Borough Council has been absorbed into the Central Otago District Council. Consequently, the assets are shared 75% with Queenstown Lakes District Council, and 25% with Central Otago District Council. It is understood that the land is classified as Endowment land.

The Memorandum of Lease is appended – see Appendix 1.

2.3 LAND RENTAL

Being owned by the Queenstown Lakes District Council, the land is under rental to the joint venture. A copy of the most recent valuation of that rental is appended – see Appendix 2.

2.4 ACCESS

Vehicle access to the forest is gained via Felton Road, a metaled track running off Malligans Road and providing easy access to the low altitude southern boundary of the forest. A series of unmetaled 4WD tracks provide access through the forest to the northern and upper altitude limits.

2.5 NEIGHBOURS

The forest is bounded to the west and north by Coronet Station, a Pastoral Licence area currently held by Mr Brian Dagg and used for grazing merino sheep. To the south and east, the forest is bounded by private land. An extensive part of the southern boundary is with the Flight Park, a commercial tourism venture involving paraponting and hang gliding. Other neighbours include country life style farmlets grazing a range of stock including deer.

2.6 PHYSICAL ENVIRONMENT

Altitude. The forest lies between an altitude of 500 metres and 1100 metres above sea level.

Topography. The topography of this forest is a relatively uniform lower mountain slope of moderate to steep contour, and with a number of shelves of easy contour. There is an active slip near the middle of the forest which is slowly being stabilised by the trees. Rock outcrops occur on some ridges and spurs, but the site is not excessively rocky.

Geology. The whole region is the subject of intense mountain building activity, and its corollary, natural erosion. Although many kilometres south-east of the main Alpine fault, Coronet Forest is close to a number of smaller fault lines such as the Shotover fault. The underlying rock formation on Coronet Forest is metamorphic rock of the Haast Schist Group – Chlorite subzone 4, which is coarsely foliated schist including some biotite schist, from the Permian to Carboniferous periods.

Countering the active mountain building processes associated with most active faults, natural erosion from glaciation and fluvial action has and is still taking place in the wider region. The land under Bob's Peak Forest is not exempt from this, and the current landform clearly shows the signs of past glacial and present erosion activity. Surface rocks are almost as common as weathered soil on this site.

Soils and Land Stability. The soils are Dunstan steepland silt loams to stony loams. These are upland and high country Yellow-Brown Earths, low to very low in natural fertility, but very good forest soils. The soils are prone to wind and sheet erosion, severe frost heave, and some landslides.

Climate. The climate of the region is montane. The annual rainfall of 1000 to 1200 mm is spread relatively evenly throughout the year. Summer high temperatures reach 35^0C, while winter low temeratures fall to -12^0C. Snowfalls occur in winter, but snow seldom lies for more that a day or two.

2.7 VEGETATION

The original vegetation (before planting) was a mixture of tussock and introduced grasses, some native shrub species including matagouri and tutu, with and extensive cover of the introduced weed sweet briar, in the lower altitudes. In addition to tussocks and some introduced grasses, snow berry, Dracophyllum spp, wild Spaniard and sub-alpine herbs at the higher altitudes. It is highly likely that native beech forest – especially mountain beech – clothed the lower slopes until destroyed by early European or pre- European fires.

2.8 CURRENT USE OF THE FOREST

The forest is not under any known concession, but is used for a variety of recreational uses including horse riding (on forest tracks only), walking and hunting.

2.9 DISTRICT PLAN

Under the current District Plan the forest is zoned Rural General. Under this zoning, there are no restrictions on forest management or forest harvesting. There are, however, certain matters that need to be noted including the following:

1. The section on District Issues (Section 4) deals with a number of issues. The main issue which could impinge on forestry is landscape and visual amenity. The character of the landscape of the district is seen as an important asset, and the two forestry related matters that are noted are wilding control, and control of the location of new plantings. It is the Council's intention to monitor "changes in nature, scale and location of farming, forestry and other land based rural activities" in order to protect the landscape and visual amenity of the district – Section 4.10.4(xvi).
2. Forestry is a discretionary activity as far as planting new areas is concerned, and it is the landscape and amenity issue that is behind this classification.
3. There are restrictions on roading that will require a resource consent before proceeding with any upgrading of the existing tracks for logging purposes.
4. There are no areas of significant indigenous vegetation, as listed in the district plan, recorded in Coronet Forest.
5. There are no protected features or special designated areas or special zones, as listed in the district plan, recorded in Coronet Forest.

2.10 RIGHTS AND PRIVILEGES

There are no known rights or privileges over the forest.

3.0 MANAGEMENT PROPOSALS

3.1 MANAGEMENT OBJECTIVES

The management objective to be incorporated in this plan is:

To grow a crop of Douglas fir for maximum profitability within the constraints of

- good forestry practice,
- sustainable land use, and
- respecting the wider social objectives (of landscape and public use) of the Queenstown Lakes District Council as contained within the District Plan.

3.2 FOREST AREA

The forest area was last mapped in 1993. This was done by aerial photograph interpretation onto a base sheet to correct for photographic distortion as much as possible. Some stands were too young to see clearly on the photographs, and some stands have been planted since the mapping was completed. There is a need to update the mapping of this forest, and to convert the current record to full GIS capability.

Prescription: ***Update the mapping of the forest to full GIS capability with new aerial photography.***

The information on the year of planting was provided by Queenstown Lakes District Council – see Map 3. This has not proved to be 100% reliable, and for the Permanent Sample Plots described later, the age of the trees in the plots was corrected, where necessary, by counting the annual rings, when these were found to be different from the age shown on the map.

The current record shows the planted areas as follows:

SPECIES	YEAR PLANTED	AREA (hectares)		
		GROSS	GAPS	NET
Douglas fir	1984	11.2		11.2
	1985	78.4		78.4
	1986	26		26
	1986	10.8		10.8
	1987	2.1		2.1
	1987	13.5		13.5
	1988	6.5	10%	5.8
	1988	2.5		2.5
	1988	12.1	10%	10.9
	1989	6.6	10%	5.9
	1990	9.5	10%	8.5
	1991	6	10%	5.4
	1994	5	10%	4.5
	1995	5	10%	4.5
	1996	5	10%	4.5
Total		200.2		194.5

The reliability of the above estimates of planted area has not been tested.

3.3 DESCRIPTION OF THE TREE CROP

The plantation consists entirely of Douglas fir (Pseudotsuga menziesii) which was planted in successive years from 1984 to 1991 in contiguous stands, and extended in 1994 to 1996. The origin of the seed sources used in the plantings has not been recorded, but obvious visual differences show up during the spring flush. The oldest plantings (1984) flush earliest, which would suggest that they might be a Californian provenance. An attempt has been made to trace the origin of the largest (1985) plantings. It would appear that, although these were purchased from Leithfield Nursery, they in fact were supplied from Edendale Nursery, and were from the Tramway Road (Beaumont Forest) seed stand, which itself was a Washington provenance.

The high growth rates experienced in this forest (as detailed later) have led to an interest in seed from this forest. Nevertheless, there is still a relatively high proportion of trees that are malformed, the most common genetical problems being:

- Double leaders
- Ramicorn branches
- Stem wobble
- Coarse branching

Seed picked from the 1985 and 1986 plantings has been registered – see Appendix 3 - grown in Edendale Nursery, and planted out in a number of forests including Blakely Pacific Ltd forests and at Redcliff Forest in 1998, and Teviot Forest in 2000.

Most of the planting was carried out at around 3 metre by 2 metre spacing (1667 stems per hectare), although this does vary considerably in places, with some stockings over 2000 stems per hectare being observed. It appears that only 2/0 bare rooted seedlings have been used.

An inspection of the forest in February 2001 revealed that there are some small areas where nutrient deficiency symptoms are showing. These are:

- Bare slip areas where there is no topsoil left on site, and the trees are chlorotic (yellow)
- Rocky outcrops, where the trees are chlorotic and multi-leadered with tip dieback, indicating a boron deficiency. A recent foliage analysis of the worst of these trees indicated that Boron was deficient, and several other nutrients were marginal – see Appendix 4.

Neither of these areas are large, and therefore no remedial treatment is proposed at this point in time.

A Permanent Sample Plot (PSP) was established in the oldest stand in 1995, and has been remeasured annually since then. A further three PSPs were established in 1999, and have been remeasured annually. Details to date are appended – Appendix 5. From these plots, the site index of this forest currently lies between 41 metres and 44.5 metres. Site index is the average height at 40 years of the largest diameter 100 stems per hectare. Being a lot younger than 40 years, the site index is estimated from height/age curves in the South Island Douglas fir growth model, as provided by Forest Research. The site index may change over time as the crop becomes more mature, and as any inaccuracies in the height/age curves become less important.

This level of site index – 41 to 44.5 metres - is very high, and demonstrates that the site is particularly well suited to Douglas fir. However, this is only a measure of site productivity, and does not take into account tree form. In addition to the genetical defects referred to earlier, there are also some trees that have been damaged from snow and wind, the most common defects being broken tops and butt sweep, with occasional uprooting. A very rough indication is that one tree in two of the original plantings has some defect or another.

3.4 PAST MANAGEMENT

Apart from blanking, the only other silviculture that has been carried has been thinning to waste. The thinning to waste programme began in 1998 with 41.7 hectares of the oldest ages classes having been thinned to approximately 800 stems per hectare – see Map 4. A further 40 hectares were thinned to waste in April/May 2000. This is the first step in a two stage thinning to waste programme adopted in 1998.

3.5 SILVICULTURAL SYSTEMS

Being a planted forest with blocks of even-age plantings, current wisdom would suggest that the forest should be managed on a silvicultural system known as clearfelling in large coupes at a more or less fixed rotation length of around 45 years. In view of the relatively high landscape prominence of this forest, it may be that, with time, a silvicultural system invoking less landscape trauma may be demanded by the stakeholders. Such a system could include small coupe clearfelling, or shelterwood thinning. Both would likely involve higher costs than clearfelling in large coupes.

Thinning provides opportunity to remove less desirable individuals and focus the growth and development of a forest on the best individuals. Pruning provides an opportunity to remove the lower

branches from a tree, thereby permitting the production of clearwood on a proportion of the product. Pruning is not widely advocated for Douglas fir in view of the relatively long rotation required to reap the rewards of higher prices for clearwood. Thinning, on the other hand, is widely accepted as being beneficial for a number of reasons, and there are several reasons for adopting a tending regime incorporating several thinnings:

- It provides an opportunity to identify and progressively remove the least desirable trees over a long period of time, reducing the risk of mistaken selection, and permitting opportunity to remove individuals that do not show up their poor traits until later in the rotation.
- It reduces the 'shock' of thinning too heavily at one time, causing sub-optimal use of the site for a period of time until the remaining trees recapture the space, and creating potential for climatic damage such as windthrow until the trees redevelop the mutual support that they need to withstand high winds.
- It provides time to re-evaluate options for the future, as markets change over time, and as the technology for extracting and/or utilising thinnings changes.

The first evaluation of appropriate thinning regimes for this forest was undertaken in 1997 – see Appendix 6. Three options were considered – a single thinning to waste, two thinnings to waste, and three thinnings to waste. At the time, there was little thought given to production thinning because of the steepness of the site.

The net outcome of that evaluation was that Council adopted the regime of two thinnings to waste, and this has been the regime that has been followed since then. In summary, the regime is as follows:

	First Thinning	Second Thinning
Timing of each thinning	Age 14 – MTH 15.5 metres	Age 22 – MTH 25.2 metres
Residual stocking	800 stems per hectare	450 stems per hectare
Basal area reduction at each thinning	34%	29%

This has proven to be a good decision as it keeps options open for the future. For instance, the recent success of the production thinning in Bobs Peak Forest has raised the question about the feasibility of this as an option for Coronet Forest. Also, since carrying out the evaluation, a number of matters have changed which could influence the choice of regime. These include:

- The choice of discount rate. This is a critical factor in evaluating any regimes in view of the long time periods involved. A discount rate of 7% was used in the original evaluation. It may now be appropriate to use a higher discount rate, closer to 9%.
- The actual cost of thinning to waste has proven to be much higher than expected. This could significantly alter the results.
- The Douglas fir growth models are still quite crude, but will improve with time.
- In the original evaluation, an export log scenario was used. Future evaluations should explore the results using both domestic and export log markets as options.
- The log grades that were used in the evaluation were a crude guess at what might be obtained from the respective regimes. The use of STANDPAK to generate these is more appropriate, and the models will improve with time.

A re-evaluation of the regimes has now been carried out – see Appendix 7 - and has revealed the following as the best regime(s), assuming a 45 year rotation:

	Current Regime	Proposed Regime	
Number and type of thinning	Two thinnings to waste	Either; two thinnings to waste and one production thinning	Or; two thinnings to waste and two production thinnings
Timing of each thinning First thinning Second thinning Third thinning Fourth thinning	 Age 14 – MTH 15.5 m Age 22 – MTH 25.2 m	 Age 13 to 14 – MTH 15.5 m Age 20 to 22 – MTH 25.2 m Age 30 – MTH 36 metres	 Age 13 to 14 – MTH 15.5 m Age 20 to 22 – MTH 25.2 m Age 30 – MTH 36 metres Age 38 – MTH 43 metres
Residual stocking First thinning Second thinning Third thinning Fourth thinning	 800 stems per hectare 450 stems per hectare	 800 stems per hectare 500 stems per hectare 300 stems per hectare	 800 stems per hectare 500 stems per hectare 350 stems per hectare 250 stems per hectare
Basal area reduction at each thinning First thinning Second thinning Third thinning Fourth thinning	 34% 29%	 34% 24% 28%	 34% 24% 19% 20%
Internal Rate of Return	8.4%	8.8%	8.8%

Notes: MTH = mean top height. For thinning to waste, MTH is the governing measure, with age being indicative only. For production thinning, the reverse is true. This is because branch control is essential in the earlier years of a tree's life, whereas, for production thinning, there is little point in carrying this out too close to clearfelling age.

The following thinning programme has been prepared to cover the next 7 years and is based on an annual programme of approximately 20 hectares using the above proposed regimes:

YEAR PLANTED	STAND AREA	YEAR OF FIRST THINNING (1)	YEAR OF SECOND THINNING (1)
1984	11.2	11.2 ha in 1998	11.2 ha in 2004
1985	78.4	30.5 ha in 1998 40 ha in 2000 7.9 ha in 2002	8.8 ha in 2004 20 ha in 2005 20 ha in 2006 20 ha in 2007 9.6 ha in 2008
1986	26	12.1 ha in 2002 13.9 ha in 2003	
1986	10.8	6.1 ha in 2003 4.7 ha in 2004	
1987	2.1	2.1 ha in 2004	
1987	13.5	13.5 ha in 2004	
1988	6.5	6.5 ha in 2005	
1988	2.5	2.5 ha in 2005	
1988	12.1	12.1 ha in 2005	
1989	6.6	6.6 ha in 2006	
1990	9.5	9.5 ha in 2007	
1991	6	6 ha in 2008	
1994	5		
1995	5		
1996	5		

Note (1) All operations are subject to the crop being at the required mean top height

It should be noted that it is unlikely that a production thinning regime will be able to be applied to all sites in the forest. This is because some sites may be too steep, too unstable, or simply uneconomic to

access. In such cases, these parts may be left at 450 to 500 stems per hectare after the second thinning to waste.

Prescription: ***The tending regime will include two thinnings to waste followed by one or two production thinnings, as markets permit.***

Prescription: ***This regime will be re-evaluated prior to the oldest stand becoming due for its second thinning to waste (2004-2006) in order to check the decision using up-to-date information.***

3.6 FERTILIZING

Although there are small areas of the forest that are showing nutrient deficiency symptoms, there is no need at present to apply any fertilizer to correct these deficiencies, which are very localised. Nevertheless, the forest will continue to be monitored, and recommendations will be made to correct any deficiencies that are believed to be serious or widespread.

3.7 LOGGING METHOD

Production thinning is likely to take place at ages 30 and 38, and clearfelling is expected to take place at age 45 or thereabouts. The relative strength of the market at the time will dictate actual timing of these operations.

Current convention would suggest that logging is likely to be by ground hauling systems such as rubber tyred skidders, and/or cable hauling systems. Whatever systems are appropriate at the time of harvesting, any operations should be preceded by pre-harvest inventory and harvest planning. Under current convention, the maximum haul distance for a skidder is 270 to 300 metres, and for a cable hauler the maximum single stage haul distance is 400 metres.

It will be necessary to undertake a full logging planning exercise before the first production thinning, and it will also be necessary to carry out an indicative logging planning exercise in 2004, if it looks as though the programmed second thinning to waste can be economically replaced with a production thinning.

Prescription: ***Pre-harvest inventory and logging planning will be carried out at least 1 year before operations commence.***

Prescription: ***Indicative logging planning will be carried out before the decision is made to carry out the programmed second thinning to waste.***

3.8 FENCING, TRACKING AND ROADING

The boundary fence around the older plantings (1984 to 1991) is a relatively new fence and is in good repair. There is no fence around the younger plantings. Surprisingly, they have survived the exposure to sheep browsing, and most are now above browse height. Therefore, there is no need to fence these off.

The only tracks/roads on the property are the establishment tracks formed at the time of planting. These have been repaired from time to time, but would not be suitable in their current form for any logging traffic. A major upgrade will be required before the first production thinning operations are carried out. This will require widening, some realignment, reculverting, application of base course and metalling.

Prescription: ***Roading planning will be carried out at least two years before the first production thinning.***

3.9 BEST PRACTICES, OCCUPATIONAL SAFETY AND HEALTH

Throughout any operation, all contractors will be expected to employ “best practices” as set out in the New Zealand Forest Code of Practice published by the Logging Industry Research Organisation.

All contractors are expected to comply fully with the requirements of the Health and Safety in Employment Act and Regulations. This will require:

- an onsite hazard identification for each and every operation
- warning notices and barriers (if necessary) to keep the public out of operational areas when work is being undertaken
- road control where helicopters or logging machinery are working over or within the minimum distances permitted from public roads

3.10 EXPECTED YIELD

The expected yield from this forest has been calculated from the data gathered from the Permanent Sample Plots that have been established in the forest. A total of four 0.04 hectare plots have been established, and have been remeasured annually. The first was established in 1994, and the remainder in 1998. This is an extremely small database, but it is also an important database as it represents repeated measurements of the same trees. A summary of the results are appended in Appendix 5.

The above data has been "grown" to maturity using STANDPAK, a computer program designed to provide estimates of future volume and growth using selected models contained within the program. The estimates are only as good as the data being used, and the models themselves, both of which are being continually updated. At the best, we zig-zag our way through a rotation, getting closer and closer to the truth. Nevertheless, the information provided by such programs is of immense value in providing a base on which to plan both the future silviculture for the forest, and the future harvesting.

The first step in deriving estimates of future volume is to stratify the forest into crop types. Each crop type should be clearly defined, and should be able to be mapped. Crop types may be distinguished from one another by the species, age class, silvicultural treatment, or productivity. Coronet Forest is remarkably uniform, being just one species, a limited age range, a single silvicultural regime, and similar growth throughout. Therefore, the whole forest is represented by a single crop type. The base data that has been used to model the forest are as follows:

Log Type	Volume (m3 per hectare)					
	Thinning to waste regime	One production thinning regime		Two production thinnings regime		
	Clearfell age 45	Thin at age 30	Clearfell age 45	Thin at age 30	Thin at age 38	Clearfell age 45
Domestic A	967	40	847	27	93	778
Domestic B	114	81	91	54	43	69
Domestic C	21	19	16	13	6	14
Firewood	147	37	117	26	26	106
TOTAL	1294	207	1116	150	206	1012
GRAND TOTAL	1294		1323			1368

The log types are described as follows:

	LOG GRADE A	LOG GRADE B	LOG GRADE C	FIREWOOD
Pruned	No			
Minimum small end diameter (cm)	300	200	150	100
Maximum branch diameter (cm)	10	10	6	25
Maximum sweep (1 or 2)	1	1	1	
Minimum length (m)	3.7	3.7	3.7	3.7
Maximum length (m)	6.1	6.1	6.1	6.1

The tending regimes used in the modeling process are as described in Silvicutural Systems above. These regimes were derived from a modeling exercise which looked at the best regime to derive the highest NPV, as described in appendix 7.

It is unlikely that the Councils will decide to clearfell strictly according to age class because this would result in large areas being cleared in a very short space in time giving rise to marketing, skilled labour and landscape problems. The classical approach of a "normal" forest, where the total available yield is spread evenly over time for an entire rotation, is equally unlikely, as this gives rise to some of the current crop reaching an age that is far beyond a 45 year rotation, which may not be prudent for reasons of risk, forest stability, and marketability of exceptionally large logs. The most likely approach will be something between these two alternatives. For the sake of providing an indicative future cash flow, it is suggested that cleafelling approximately 10 hecatres per annum commences in 2030, when the oldest age class has reached 45 years of age, and is spread relatively evenly over a 20 year period. Using 2001 prices, the expected annual net revenue from such a programme would be in the order of $1.2 million (pre tax and G.S.T). It is assumed that the Councils will want to replant immediately after clearfelling.

3.11 FOREST VALUE

The forest is valued annually for the purposes of reporting the value of the asset in the respective owners' annual accounts. The value presented in the annual accounts is the "current" value, or the value that the forest is worth if sold in its immature state. However, based on domestic prices in 2001, and the expected yields shown in the previous section, the forest has a value at maturity of $24 million (pre tax and pre GST) in 2001 dollar terms. This "terminal" value is for the trees only, as the land is not for sale.

3.12 FOREST RESEARCH

Continued research, and keeping up with the latest technology, is as important for forestry as it is for any other industry. The Lakes Combined Afforestation Committee may want to join the Douglas fir research co-operative in order to be able to tap into the latest research results, and to participate in directing research into this species in New Zealand. As Wrightson Forestry Services is already a member of the co-op, the committee can benefit from this membership by paying the annual area levy.

There are 4 permanent sample plots established in this forest – see appendix 5. These will be remeasured annually in order to maintain an important database on the growth of this forest.

The possibility of using the forest to dispose of sewage waste from Arrowtown is to be investigated.

Prescription: ***If sanctioned by the committee, join the Douglas fir research co-operative under the umbrella of Wrightson Forestry Services.***

Prescription: ***Remeasure the permanent sample plots annually.***

Prescription: ***Investigate the possibility of using the forest to dispose of sewage waste from Arrowtown.***

3.13 PROTECTION

Wilding Control

Douglas fir has been an aggressive coloniser of unforested land. The Council has decided to use some of the net earnings from any harvesting carried out on Council land to undertake wilding control in other areas. A programme for this will be worked out between the Department of Conservation and the Council.

Fire Control

Fire control rests with the Council, the forest being in the rural fire fighting area. In view of the substantial value of this forest, the trees should continue to be covered by a fire insurance policy.

Pest Control
Feral goats and domestic sheep have been a problem in the past, but now that most of the plantation is above browsing height, these animals pose little threat while in low numbers. If populations increase enough to cause problems, control can be carried out by licensed operators using poisoned bait. Regular inspections of the forest will reveal any potential problems.

Possums are the greatest threat to the ongoing health of the forests. Large numbers can cause serious damage to healthy trees. The signs are obvious – the leaders (tips) of trees will be ring barked and die back to the wounds in periods of high population levels. This causes the tree to send up a replacement leader, leaving a kink in the main stem. Possum numbers can be monitored using bait stations. When justified, poison baits can be substituted for non toxic baits, in order to achieve control. Regular inspections of the forest will reveal any potential problems.

Disease Control
Douglas fir is relatively free from debilitating diseases. However, Swiss needle cast (Phaeocryptopus gaumanii) is present in many forests. Although this disease will not kill the host, it will severely reduce the vigour of the tree, and could lead to death from secondary infections. This fungus has not been observed in this forest. One way of minimising the risk of damage from the disease is to keep the trees actively growing in well-thinned forest so that there is plenty of air movement around the crowns. The silvicultural regime chosen for this forest is compatible with this objective. Regular inspections of the forest by qualified foresters will reveal any potential problems.

Climatic Factors
Climatic factors that can cause severe damage to forests are wind, rain, severe drought, ice and snow. Protection against climatic damage is very difficult to achieve. However, like the protection against disease, a healthy, actively growing forest that has been well-thinned in a timely fashion is less likely to be damaged by severe climatic factors than a forest that is badly in need of thinning. The silvicultural regime chosen for this forest is compatible with this objective. Regular inspections of the forest will reveal any potential problems.

Prescription: ***Regular inspections will be made by a Registered Forestry Consultant in order to check on possible problems from pests, diseases, climatic factors, or nutrient deficiencies.***

3.14 BUDGET
An annual cash flow for the project for the next 5 years has been prepared based on the above management proposals – see appendix 8. This cash flow will be used to help prepare the annual budget which is to be presented to the Lakes Combined Afforestation Committee for approval each year.

Maps

Appendix 1 – Memorandum of Lease

Appendix 2 – Land Rental Valuation

Appendix 3 – Registered Seed

Appendix 4 – Foliage Analysis

Appendix 5 – Permanent Sample Plots

PSP PLOT 1 - DOUGLAS FIR
YEAR PLANTED: 1984
PLOT AREA (ha): 0.04 hectares

DATE MEASURED	28/10/95	7/9/96	29/8/97	17/7/98	26/10/98 after thinning	15/6/99	1/5/00	13/7/0
AGE	11	12	13	14	14	15	16	
TOTAL STOCK (stems/ha)	1600	1600	1600	1025	0		0	
LIVE STOCK (stems/ha)	1600	1600	1550	1025	775	775	775	
MEAN DBH (cm)	15.0	15.6	16.7	19.5	20.0	21.3	22.92	
BASAL AREA (m2/ha)	28.3	30.9	35.1	30.6	24.5	27.8	31.9	
MEAN TOP HT (m)	0	12.8	0	14.7	0	15.9	17.5	
SITE INDEX	0	42.2	0	41.1	0	40.9	41.5	

PSP PLOT 2 - DOUGLAS FIR
YEAR PLANTED: 1987
PLOT AREA (ha): 0.04 hectares

DATE MEASURED	15/6/99	1/5/00	1/5/00 After thinning	13/7/01
AGE	12	13	13	14
TOTAL STOCK (stems/ha)	1050	1050	750	750
LIVE STOCK (stems/ha)	1050	1050	750	750
MEAN DBH (cm)	19.4	20.9	22.2	23.9
BASAL AREA (m2/ha)	31.3	31.3	29.2	33.8
MEAN TOP HT (m)	14.0	15.5	0	16.6
SITE INDEX	44.5	44.5	44.5	44.2

PSP PLOT 3 – DOUGLAS FIR
YEAR PLANTED: 1987
PLOT AREA (ha): 0.04 hectares

DATE MEASURED	15/6/99	1/5/00	1/5/00 After thinning	13/7/01
AGE	12	13	13	14
TOTAL STOCK (stems/ha)	1775	1775	1025	1025
LIVE STOCK (stems/ha)	1775	1775	1025	1025
MEAN DBH (cm)	17.1	18.25	19.2	20.5
BASAL AREA (m2/ha)	41.2	46.4	29.7	33.9
MEAN TOP HT (m)	14.1	15.2	0	16.3
SITE INDEX	44.6	44.2	44.2	43.6

PSP PLOT 4 – DOUGLAS FIR
YEAR PLANTED: 1989
PLOT AREA (ha): 0.04 hectares

DATE MEASURED	15/6/99	1/5/00	13/7/01
AGE	10	11	12
TOTAL STOCK (stems/ha)	2250	2250	2250
LIVE STOCK (stems/ha)	2250	2250	2250
MEAN DBH (cm)	13.0	14.2	15.2
BASAL AREA (m2/ha)	30.2	36.1	41.0
MEAN TOP HT (m)	11.1	12.1	13.1
SITE INDEX	43.9	43.2	42.7

Appendix 6 – Evaluation of thinning regimes

Appendix 7 – Re-evaluation of thinning regimes

Re-evaluation of thinning regimes

Using better data, though still only derived from a single PSP (PSP 1 in the 1984 plantings in Coronet Forest) we evaluated a number of options. The first matter was to resolve whether the export market or the domestic market was the best market for the produce using current log prices. Therefore, the current two-thinnings-to-waste regime was tested on the two pricing options (for which there are two quite different sets of log specifications). The results showed that for the same regime and rotation, the export log market yielded 7.4% IRR, while the domestic log market yielded 8.4% IRR.

Having determined that he domestic log market was the better option, we then set about modeling increasing numbers of thinnings over a fixed rotation length of 45 years. The result was that there were two regimes with the same (maximum) IRR – the two thinnings to waste and one production thinning regime, and two thinnings to waste and two production thinnings regime both yielded 8.8% IRR.

Finally, in order to test the possibility of a longer rotation, a 50 year rotation was tested for the two thinnings to waste and two production thinnings regime, but the IRR dropped to 8.5% for this regime. The results are shown in the table on the following page, and the individual spreadsheets are attached.

In the derivation of the expected yields, the computer model STANDPAK was used. STANDPAK growth model settings used to derive the yields were as follows:

Growth model:	25 South Island Douglas fir
Basal area function:	Default
Height model:	39 South Island Douglas fir
Stand volume function:	36 South Island Douglas fir
Monthly growth function:	1
Site index:	41.5
Start setting:	17.5 MTH and 31.9 m2/ha
Tree volume table:	136 PSMEN all NZ 1977
Tree taper table:	136 PSMEN all NZ 1977
Breakage table:	4 PSMEN cleafellings and thinnings

There have been no restrictions or down grading of yields predicted by STANDPAK.

In summary, we have two regimes that yield similar results, and these should be retested with new data closer to the time that the second thinning is due to commence. A copy of all the base data is attached in order to retest using similar assumptions.

	Current Regime – Export Market	Current Regime – Domestic Market	New Regime	New Regime	New Regime
Number and type of thinning	Two thinnings to waste	Two thinnings to waste	Two thinnings to waste and one production thinning	Two thinnings to waste and two production thinnings	Two thinnings to waste and two production thinnings
Rotation length (years)	45	45	45	45	50
Timing of each thinning First thinning Second thinning Third thinning Fourth thinning	 Age 14 – MTH 15.5 m Age 22 – MTH 25.2 m	 Age 14 – MTH 15.5 m Age 22 – MTH 25.2 m	 Age 13 to 14 – MTH 15.5 m Age 20 to 22 – MTH 25.2 m Age 30 – MTH 36 metres	 Age 13 to 14 – MTH 15.5 m Age 20 to 22 – MTH 25.2 m Age 30 – MTH 36 metres Age 38 – MTH 43 metres	 Age 13 to 14 – MTH 15.5 m Age 20 to 22 – MTH 25.2 m Age 30 – MTH 36 metres Age 38 – MTH 43 metres
Residual stocking First thinning Second thinning Third thinning Fourth thinning	 800 stems per hectare 450 stems per hectare	 800 stems per hectare 450 stems per hectare	 800 stems per hectare 500 stems per hectare 300 stems per hectare	 800 stems per hectare 500 stems per hectare 350 stems per hectare 250 stems per hectare	 800 stems per hectare 500 stems per hectare 350 stems per hectare 250 stems per hectare
Basal area reduction at each thinning First thinning Second thinning Third thinning Fourth thinning	 34% 29%	 34% 29%	 34% 24% 28%	 34% 24% 19% 20%	 34% 24% 19% 20%
Internal Rate of Return	7.4%	8.4%	8.8%	8.8%	8.5%

Notes: MTH = mean top height. For thinning to waste, MTH is the governing measure, with age being indicative only. For production thinning, the reverse is true. This is because branch control is essential in the earlier years of a tree's life, whereas, for production thinning, there is little point in carrying this out too close to clearfelling age.

Appendix 8 – Project Costs and Cash Flow

Disclaimer: The following project cash flow has been prepared using information gathered from various sources, including industry averages. Actual costs and prices may be higher or lower.

EXPECTED AVERAGE COSTS ASSOCIATED WITH THIS PROJECT – TWO THINNINGS TO WASTE AND TWO PRODUCTION THINNINGS REGIME

YEAR	OPERATION	COST/REVENUE $ PER HECTARE
	Direct costs **(Including supervision 15%)**	
13	First thinning to waste to 800 stems per hectare	598
20	Second thinning to waste to 500 stems per hectare	598
29	Roading	600
	Total direct costs per stocked hectare	**$1796**
	Indirect Costs	**Per ha per year**
	Administration	30.25
	Management/consulting fees	13.50
	Permanent Sample Plot remeasurement	4
	Wilding control	21.60
	Noxious animals control	0
	Membership of Douglas fir Research Co-operative	1.20
	Fence maintenance	0
	Fire control	0
	Rates	5
	Insurance	11.5
	Track and road maintenance	28.75
	Total indirect costs per stocked hectare	**$115.8**
	Revenue	
30	First production thin	7,288
38	Second production thin	13,322
45	Clearfell	96,244
	Total revenues	**$116,854**

Notes:
1. Costs include the cost a forest manager might charge for arranging to carry out the work and supervise the operation.
2. Costs exclude GST.

EXPECTED CASH FLOW OVER NEXT 5 YEARS – TWO THINNINGS TO WASTE AND TWO PRODUCTION THINNINGS REGIME

YEAR	OPERATION	AGE CLASS	AREA	COST PER HA	TOTAL COST
2001/02	First thin to waste	1985	7.9	598	4724.2
	First thin to waste	1986	12.1	598	7235.8
	Annual costs			115.8	23160
	TOTAL				**$35120**
2002/03	First thin to waste	1986	13.9	598	8312.2
	First thin to waste	1986	6.1	598	3647.8
	Annual costs			115.8	23160
	TOTAL				**$35120**
2003/04	First thin to waste	1986	4.7	598	2810.6
	First thin to waste	1987	2.1	598	1255.8
	First thin to waste	1987	13.5	598	8073
	Annual costs			115.8	23160
	TOTAL				**$35299.4**
2004/05	First thin to waste	1988	6.5	598	3887
	First thin to waste	1988	2.5	598	1495
	First thin to waste	1988	12.1	598	7235.8
	Second thin to waste	1984	11.2	598	6697.6
	Second thin to waste	1985	8.8	598	5262
	Annual costs			115.8	23160
	TOTAL				**$47737.4**
2005/06	First thin to waste	1989	6.6	598	3946.8
	Second thin to waste	1985	20	598	11960
	Annual costs			115.8	23160
	TOTAL				**$39066.8**

Notes:
1. Costs include the cost a forest manager might charge for arranging to carry out the work and supervise the operation.
2. Costs exclude GST.