

Submission on Notified
Resource Consent
PL241232043

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Submission on Notified Resource Consent

Reference PL241232043 **Submitted** 17 Dec 2024 10:53

Notified Submission

SUBMISSION ON NOTIFIED APPLICATION CONCERNING RESOURCE CONSENT

(Form 13)

Section 95A (public) Resource Management Act 1991

To: The Chief Executive
Central Otago District Council
PO Box 122
Alexandra 9340

This is a submission on the following resource consent application:

Resource Consent Number	240065
Valuation Number	2828012800
Applicant	Helios OTA Op LP
Location of Site	48 Ranfurly-Naseby Road, Ranfurly
Brief Description of Application	Land use consent to construct, operate and maintain a 300MWac solar farm
Submissions Close	19 December 2024

Writing a submission

The following will be required during this process:

- Your full name and address, telephone number and email address
- Whether you support or oppose the application for resource consent
- The reason for your submission
- The decision you wish the Council to make, including any conditions sought
- Whether you wish to be heard.

Privacy

The information you provide is official information and is used to help process your application. The information is held and used in accordance with the Local Government Official Information and Meetings Act 1987 and the Privacy Act 2020. This means that your information may be disclosed to other people who request it in accordance with the terms of these Acts. Under the Privacy Act 2020 you have the right to see and correct any personal information that Council may hold about you.

Declaration

By continuing with this application you certify that: The information you provide is true and correct to the best of your knowledge. Yes

Notified Submission

Notes to submitter

1. If you are making a submission to the Environmental Protection Authority, you should use [form 16B](#).

The closing date for serving submissions on the consent authority is the 20th working day after the date on which public or limited notification is given. If the application is subject to limited notification, the consent authority may adopt an earlier closing date for submissions once the consent authority receives responses from all affected persons.

2. You must serve a copy of your submission on the applicant as soon as is reasonably practicable after you have served your submission on the consent authority.
3. If you are a trade competitor, your right to make a submission may be limited by the trade competition provisions in [Part 11A](#) of the Resource Management Act 1991.
4. If you make a request under [section 100A](#) of the Resource Management Act 1991, you must do so in writing no later than 5 working days after the close of submissions and you will be liable to meet the additional costs of the hearings commissioner or commissioners, compared to our hearing panel. Typically these costs range from \$3,000 - \$10,000.
5. Please note that your submission (or part of your submission) may be struck out if the authority is satisfied that at least 1 of the following applies to the submission (or part of the submission):
 - it is frivolous or vexatious:
 - it discloses no reasonable or relevant case:
 - it would be an abuse of the hearing process to allow the submission (or the part) to be taken further:
 - it contains offensive language:

It is supported only by material that purports to be independent expert evidence, but has been prepared by a

person who is not independent or who does not have sufficient specialised knowledge or skill to give expert advice on the matter.

In lodging this submission, your submission, including contact details, become public information and will be available for anyone to view.

DETAILS OF SUBMITTER

Full name	Kristina Wills
Contact person (if applicable)	Kristina Wills
Electronic address for service of submitter:	kristina.wills1@gmail.com
Phone number - day time	0221904465
Postal address (or alternative method of service under section 352 of the Act):	4 Stafford Street Ranfurly 9332

Your Application

Please select one regarding the application	I oppose
Do you wish to be heard in support of this submission?	No - I do not want to be heard
Are you a trade competitor for the purposes of section 308B of the Resource Management Act 1991?	I am not
I would consider presenting a joint case if others make a similar submission	Yes

Details of submission

The specific parts of the application that my submission relates to are:	The entire document, with key issues being noise; environmental concerns; landscape mitigation; site remediation; and community benefit.
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The submission - include:

- whether you support or oppose the specific parts of the application or wish to have them amended; and
- the reasons for your views.

[Helios Submission K Wills.pdf](#) (191 kb)

Please see the attached letter.

I seek the following decision from the consent authority.

Give precise details, including the general nature of any conditions sought

Decline the application in its current state. Further information on so many aspects is required. If the application is approved then controls need to be applied.

Select below - Pursuant to section 100A of the Act, that you delegate your functions, powers, and duties to hear and decide the application to 1 or more hearings commissioners who are not members of the local authority. "See note 4 (second tab) as you may incur costs relating to this request."	I do not request
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Any other comments?

In lodging this submission, I understand that my	Yes
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submission, including contact details, are considered public information, and will be made available and published as part of this process.

Please sign (click on the words CAPTURE)

A handwritten signature in black ink, consisting of a stylized 'K' followed by a horizontal line that curves upwards at the end.

Date signed:

17/12/2024

The Chief Executive
Central Otago District Council
PO Box 122
Alexandra 9340
By Email Only: resource.consents@codc.govt.nz
Attention: Adam Vincent

Dear Adam,

RC240065 – Submission on Application by Helios Op LP to Construct, Operate and Maintain a Solar Farm in the Rural Resource Area at 48 Ranfurly-Naseby Road

This letter is provided in support of the submission form referencing the above project.

I am writing to formally oppose the proposed development of the Helios Solar Farm in the Maniatoto area of Central Otago, as outlined in the resource consent application. I am deeply concerned about the potential negative impacts this development would have on the local environment, community, and the unique character of the region.

There are many issues and concerns raised amongst the proposal, with the key ones being;

- Noise
- Landscape mitigation
- Environmental concerns
- Lack of site remediation at the end of the project
- Community Benefit

There is also a lot of missing information in the proposal relating to the details of the substation and 220V transmission connections.

Noise

The application discusses the use of steel pipes for installing the more than 550,000 solar panels, to be driven into the ground by 2.5 to 3m. Similarly constructed solar farms in New Zealand have created noise by way of pile driving with the steel piles being hit once every five seconds for weeks on end. I question if this noise goes against the Resource Management Act and think this needs to be clarified. Noise is not subjective and can be measured, and I think if the proposal goes ahead there should be parameters set.

I am also concerned about the ongoing noise generated once the project is up and running. This is from a number of sources including transformer cooling. This is not mentioned in the proposal as an issue, and we do not know what kind of transformers are being used.

I understand that the transformer fans kick in once the transformer is at approximately two thirds capacity. The low frequency sound waves created by the fans are often felt rather than heard, and can travel long distances. These come with a health risk, and it is well documented that low frequency noise can cause headaches, anxiety, fatigue and raised blood pressure due to a higher heart rate. The Helios proposal discusses using solar energy during the day, so we could expect noise then - and buying back energy from the grid at night to store, so the fans will be going again then.

On that note, I am absolutely against an offshore company having access to buy electricity at an off peak rate and sell back at a peak rate when this is not accessible to the New Zealand public. This may be a government issue, but this does raise questions: is this a solar farm, or is it a form of stock trading dressed up as “environmentally good”? No limit to

batteries has been mentioned - does this leave the door open for more and more batteries to appear? It seems that is there the money is to be made for a company that

Having worked in a large commercial building that generated harmonics at low frequency, I can attest to what a horror they could be at times. The building was across the road from a large shopping mall, and at times you could be standing in one of the shops and think you were having a medical event with the sound and vibration that not everyone could hear or feel.

Noise would also come in the future as wear and tear happens. At the beginning everything is nice and tight - all of the panel connections, linkages and so on. We are a windy place located in the "roaring forties" and we know that we can have gale force winds for days, weeks, or months on end. After a few years all of those parts would become floppy from buffeting by wind. This is a documented effect at solar farms worldwide.

There will also be traffic noise generated from the movements of vehicles while construction happens. Helios proposes 24 - 26 vehicle movements per day - but this does not take into account the proposed 200 or so staff working on site during the construction phase.

I believe you could reasonably say the quiet, rural setting of the Maniatoto is just one factor of who people choose to live here. Do we want to take that away?

Landscape Mitigation

The visual and landscape character effects of the proposal as well as the glint and glare effects are heavily reliant on the proposed mitigation planting. This mitigation is not expected to reduce adverse effects until the plants are at mature height, in about five years, according to the Boffa Miskell report. Five years is a long time to wait - and I would love to know what sort of plantings, even ones with irrigation, would be mature within five years. Our harsh climate is restrictive, and the success of plantings at such a high level is questionable.

I would like to see expanded detail on this.

Environmental Concerns

The Maniatoto is known for its stunning natural landscapes, which contribute to the region's identity and economy, particularly in terms of tourism and agriculture. The proposed location of the Helios Solar Farm threatens to alter this landscape significantly. I am concerned about:

The impact on local wildlife and ecosystems: Solar farms can disrupt native habitats, particularly in rural or undeveloped areas, and have the potential to harm local flora and fauna. The disturbance to wildlife, especially migratory birds and native species, has not been adequately assessed in the proposal.

Land degradation: The conversion of productive agricultural land into a solar farm could lead to soil compaction, loss of biodiversity, and long-term land degradation. Given the region's reliance on agriculture, this could have significant repercussions on local farming practices.

Visual pollution: The large-scale installation of solar panels could mar the natural landscape, particularly in areas of high scenic value. Central Otago is a popular tourist destination, and the proposed development could affect the aesthetic and cultural values that attract visitors to the region. CODC itself has put "a timeless land" on the Maniatoto signage. A sea of glass panels is not timeless.

Fire: Also significant is the risk of fire. We have high, hot winds on a regular basis, paired with tinder dry grass during drought. Fire can travel fast, over long distance, in the right conditions. The lack of response to the FENZ list of requirements from Helios demonstrates that Helios is not familiar with local conditions. The fire aspect of this proposal needs a lot more detailed information to give confidence in the proposal.

With regard to fighting any fire, the Maniatoto has two volunteer fire brigades, and I would am concerned that a solar farm and subsequent risks could potentially be off putting to new recruits. We have all seen the online videos of lithium batteries burning, and we all know you can't put them out. We know that lithium battery fires can cause a range of health issues including respiratory problems, systemic poisoning, neurological effects and more, due to the heavy metals and chemicals used in the batteries. The fire may not start on the solar farm, but given the proximity to the Naseby Forest and other farming operations the risk is not minimal.

Following on from a fire, there is an environmental disaster. The number of batteries in the proposal has leapt from two, initially, to thirty two, and with no limit appearing in the documentation. I would question if there will be a cap placed on this by CODC - or are we going to see a reduction in solar panels installed and an increase in batteries and a subsequent increase in fire risk?

It is not clear what sort of batteries will be used, so it is hard to pinpoint the exact damages that could be caused. We can see that the batteries will be on concrete pads, not banded or isolated from the ground. Our groundwater is our lifeblood here - as an agricultural region, we rely on water. The risk of contamination after a fire is high, given our water table is only 7m underground. The risk of catching fire is not trivial, and it will never be zero.

When batteries used in solar farms catch fire, there is the risk that they will plume. The general advice for this is to evacuate, if there is time, or shelter in place. The gases released are toxic, and in particular hydrogen fluoride. A single battery pack (out of the 32 in the proposal) from Naseby has the potential to create a toxic plume that is an immediate danger to human life and health 200m wide by 20m high and 750m long. Worse is that if it meets water it creates hydrofluoric acid - in layman's terms this is acid rain!. Should an event like this happen there is simply not enough time to ensure the safety of all residents - and let's not forget the tourists, and cyclists on the rail trail. We are a small rural community that does not have the facility to treat tens or hundreds of people with severe mouth and throat burns, hypocalcemia, skin damage and more; while we watch our flora and fauna die in front of our eyes. That may seem like an apoplectic exaggeration, but the worst case scenario for our community is just that, apocalyptic. There is no emergency management plan included in the documentation with who is responsible for what and and this is of huge concern.

There is also no plan for containing or cleaning up any fire residue. This is major. I appreciate that no one wants a fire to happen, but the risk is around 2.5% per year, based on current data. Over the life of the solar farm this adds up to more than a 60% chance. The residue containment and clean up needs addressing with a high level of detail with prescribed information on who is responsible for what, and timeframes.

General weather isn't taken into account either. We have regular thunderstorms in Spring with hail - you only need to look at the solar farm in the UK after a recent hail storm to see the glass panels shattered. You can't graze sheep on land that's covered in broken glass. Panels may be engineered to withstand a variety of conditions, but our climate is a particularly harsh one. Are there any examples of solar farms in similar conditions?

There appears to be no mention of a plan in the instance of the Alpine Fault happening. I understand that in the event of such an earthquake, a solar farm needs to be able to operate islanded. There is no mention of this in the proposal and needs further investigation.

Glint and glare: There is no mention of the effects of how the proposal will comply with the requirements for the Naseby Dark Skies community standards, and whether full moon or bright moonlight will cause glint and glare that detracts from the dark skies that Naseby and the wider region rely on for tourist income.

The comments on glint and glare effects on road users assume that a fleeting effect is safe. The brightness of the glare from sunlight can cause temporary blindness and at 100kph is a safety issue on the State Highway 85 and the adjoining local roads. If the landscape planting does not reach ideal height for five years, this is not going to be effectively mitigated. Solar banking and the angle of incidence of light on the panels will create sunstrike. We have a mix of locals and tourists on the roads, and while Helios considers the low use roads not significant, they are. The risk to people does not matter if they are on a state highway or rural back road, the value of life is the same. We know sunstrike causes accidents, and you are more likely to find an escaped sheep or cow on a rural road, and with sunstrike may not see it until it is too late, or not at all.

Water Use: The scale of the solar farm would require significant water resources, excluding the wetland. It was only a couple of years back that the town of Ranfurly was on a stop water notice after the tanks almost ran dry, leaving not even enough water to put out a house fire. In a region that already faces challenges with water management, it is important that it is well considered how water will be managed for such a project, particularly in terms of its sustainability and long-term effects on the environment and local agriculture.

Site Remediation

The applicant has stated that they are responsible for the clean up and remediation of the site at the end of the 35-year project lifespan (back to its original condition). They also note that the solar panels will need to be replaced in about 20-25 years.

There is no mention of where the development infrastructure will be taken at completion or when components are replaced. The local and national refuse centres are not large enough to cater for this level of waste, and may not be equipped to deal with the nature of the waste. Helios says the waste can 100% be recycled, but this is in laboratory conditions, not in NZ.

This clean up, recycling of infrastructure, or disposal of it needs to be addressed early, and robust consent conditions in place to protect the landowner and others from having to do the clean-up in the event the applicant defaults on the development for any reason. This should include a bond of some sort based on a realistic cost to deal with the waste in 35 years' time.

It is assumed the mitigation planting will remain at the time of remediation.

Community Benefit

I cannot see one clear benefit for the Maniatoto community. The area has a comparably low rate of unemployment, and once the farm is operational it will be operated remotely, meaning there may be work for one or two locals at the most. This could potentially be offset by job loss - the area is known for its big sky, wide spaces, timeless landscape, and with a number of local businesses operating on the back of this the farm may change the way that tourists view the area. I cannot see that a sea of glass panels would be any kind of tourist attraction.

It is well documented that property values decrease when a solar farm is constructed. The rural charm is lost.

There is no mention of subsidised power for locals, no community trust fund being set up.

The economic benefits are questionable at best. It is all risk to the community and no reward.

Alternative Solutions

Instead of this large-scale development, I urge the council to consider alternative locations that are less disruptive to the environment and community. It is not worth compromising the natural beauty and cultural significance of Central Otago for something that brings little benefit to the area.

Solar farms appear to be good when they are the right size, and in the right place. I argue that the proposed solar farm is not the right place, or the right size.

Given the 30% transmission loss of electricity, and the necessary replacement of the Cook Strait cable at a cost of \$5 billion (who picks up this tab?) - why not put a smaller solar farm exactly where it's needed - up north. There are plenty of suitable locations to put a solar farm that can hook into the grid that have better sunshine hours than us. Surely that is a better business case - build it where we need it.

Helios talks about moving towards a zero carbon future. Hydro generation is considered carbon zero and is more suited to the South Island. Thermal generation can achieve zero carbon as demonstrated by the Ngawha Geothermal Power Station - and it has the advantage of generating all of the time, whereas solar panels operate at 16% or less of full capacity 50% of the time.

Missing Information and Other Matters

ORC Consents

There are allusions in the application documents to the need for consents to be obtained from Otago Regional Council (ORC) for works within specified distances of wetlands or other waterbodies on the site, including the need for existing culvert crossings to be upgraded. The ORC consultation record attached with the application indicates consents may not be required.

It would be good to have more detail of what is proposed so the need for consents from ORC or otherwise is confirmed.

It is also considered that the CODC consent should not be approved without ORC consents being approved, or that conditions of consent should require the ORC consents to be confirmed (and if required) to be in place before works commence. Ideally the application should have been jointly notified as it allows the community to understand all aspects of the proposal at the same time and ensure competing interests and conflicts and effects can be addressed in an integrated manner.

Legislation and Technology

It seems that legislation and District Plan provisions have not caught up with technology and is not fit for purpose as it does not appear to recognize the range of risks and hazards associated with the lithium ion batteries and other operational requirements of the solar farm. However, while the Council's hands may be tied by this legislation for an activity that may be

considered nationally or regionally significant infrastructure/facilities, the proposal is still a Discretionary Activity and therefore any matter can be considered.

The information on the substation and associated infrastructure required to connect with the Transpower network is relevant and integral to the proposal so should be considered. Towers of 24 metres height and lines need to be considered in terms of the potential visual and landscape character effects on the local environment.

The Boffa Miskell report noted the big skies and plains as a unique landscape that is internationally recognised. It is critical to the local tourist industry, including the Dark Skies Community significance being promoted by Naseby and covered in the District Plan.

General Comments

The applicant seems to be relying on statements that the proposal will benefit the community, while the power generated will be provided via 220v lines to the North Island, and will not provide more resilience for the community in terms of local renewable power generation.

Workers may need to be specialists, so may be flown into the country. It is not clear how many local people could get work on the construction project. The operation of the development only requires low levels of maintenance by 1-2 people. There is no clear benefit to the community in terms of social and economic effects, other than the landowner who will still be able to graze their sheep on the land. This is not “consistent” with the objectives and policies in the District Plan that seek to support the local community.

I am not against solar farms, but I believe that they should be the right size and in the right location. The Helios website makes statements on a lot of the points I have raised, but give no actual data to back their claims up.

Conclusion

For the reasons outlined above, I strongly oppose the development of the Helios Solar Farm in its current form. I urge the Central Otago District Council to carefully consider the long-term environmental, cultural, and economic impacts of the proposal and to explore alternative solutions that will better serve the community and preserve the unique values of Central Otago.

Thank you for your attention to this important matter. I trust the council will give full consideration to the concerns raised by myself and other members of the community.

Yours sincerely,

Kristina Wills

CC: Helios OTA Op LP
C/- The Property Group
L3 Craig Investment
36 Grant Road
Frankton
Queenstown 9300
Attention: Mishka Banhidi

By Email only: mbanhidi@propertygroup.co.nz