Meeting Minutes

Date: June 5, 2024
Time: 12:45 PM
Location: Main Homestead, followed by a site tour

Attendees:

- **Lodestone:** Richard Pearce, Daniel Cunningham
- **Haldon Station:** Paddy Boyd, Edward Klisser, Andy McFarlane
- **Ngai Tahu (AEC):** Michael McMillen, Sally
- **Ngai Tahu (Waihao):** Patrick Tipa, Cody Tipa
- **Ngai Tahu (Aukaha):** Greg Carson

Apologies:

Gail Tipa, Justin Tipa

Meeting Commencement:

The meeting commenced at 12:45 PM at the main homestead. Attendees spent approximately 30 minutes introducing themselves and mingling with some food and refreshments.

Site Tour:

Attendees then divided into three cars for a tour of the proposed solar farm location:

- **Car 1:** Paddy Boyd, Richard Pearce, Greg Carson
- **Car 2:** Edward Klisser, Daniel Cunningham, Michael McMillen, Sally
- **Car 3:** Andy McFarlane, Patrick Tipa, Cody Tipa

Site Visit Highlights:

1. **First Stop:**
    - **Introduction to the Project:**
        - **Presented by:** Paddy Boyd, Daniel Cunningham, Richard Pearce
        - **Details:**
            - Paddy Boyd provided background on the partnership between Haldon Station and Lodestone, emphasizing the commitment to long-term and local ownership, demonstrable progress on sites, and the quality of management and governance.
            - Daniel Cunningham elaborated on Lodestone's inception and the compelling attributes of the site, including land scale, transmission potential, and solar resource quality.
            - The site's preference was highlighted due to its relative privacy, minimal baseline ecological environment, and the potential ecological benefits from solar installation and wind protection.
            - Discussion included the addition of a rabbit fence for ground and ecological protection.
            - Questions were addressed regarding solar panel lifespan, decommissioning plans, and recycling opportunities.
2. **Second Stop:**
    - **Location:** Nearer to the lakeshore
    - **Discussion:**

        - Existing and potential native shelterbelt on the northwestern boundary at the main access location.
3. **Third Stop:**
    - **Location:** Northwestern boundary
    - **Discussion:**
        - Views from Haldon Arm Road.
4. **Fourth Stop:**
    - **Location:** Site of new water pipe installed by Haldon Station 6 years ago
    - **Observation:**
        - Noted significant regrowth of disturbed ground compared to surrounding areas.

Conclusion:

The meeting concluded with a debrief back at the homestead. Richard Pearce and I walked attendees through a detailed presentation, which is included in Appendix A.

Meeting Adjourned: 4:00 PM

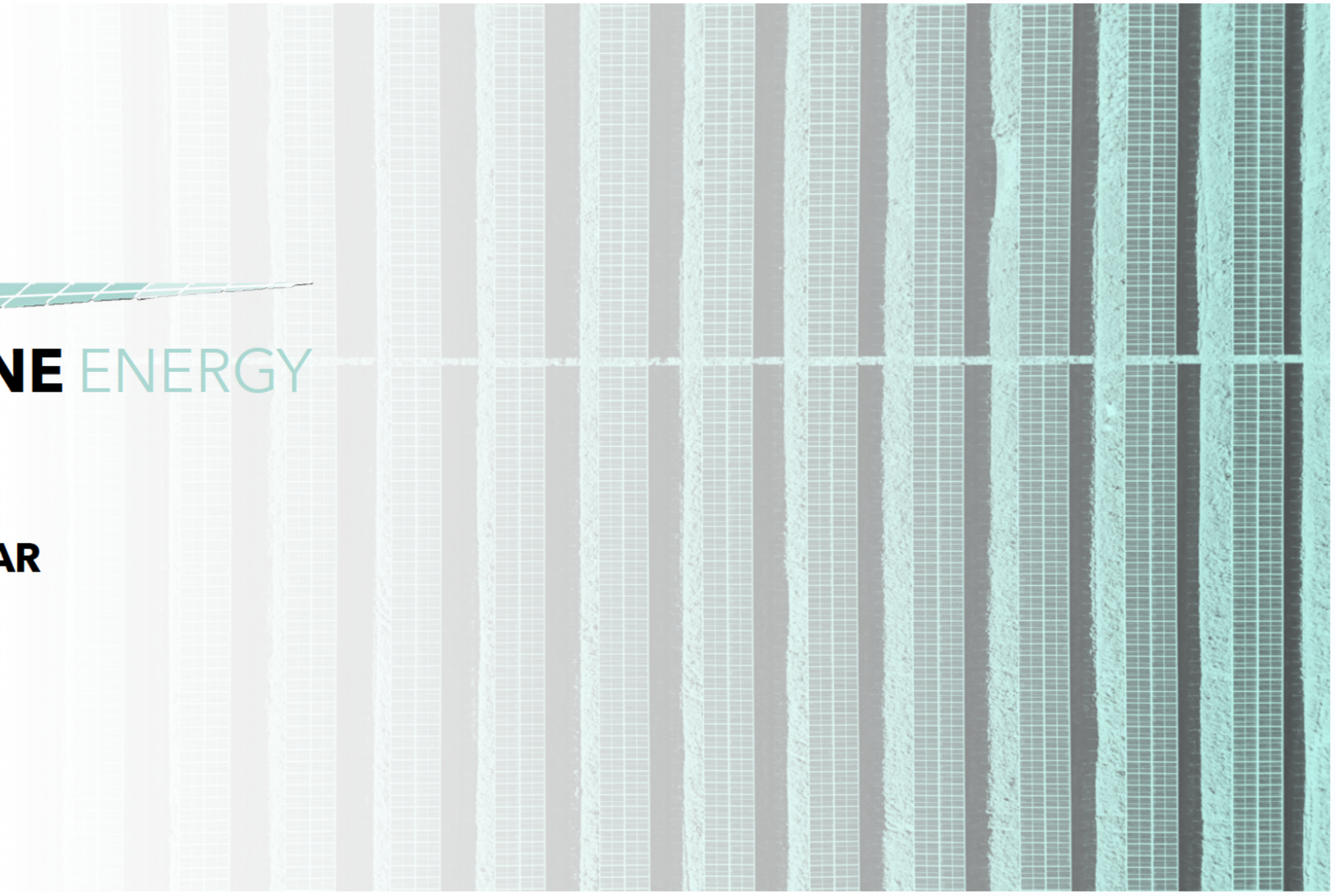
Notes:

Appendix B & C are included with reference to the coordination before and after the meeting as initial contact was made in December 2023 and the meeting was deferred by Ngai Tahu twice.

LODESTONE ENERGY

HALDON SOLAR

APRIL 2024



ABOUT LODESTONE – WHO ARE WE?

Our kaupapa is to be dedicated partners and collaborators with community and stakeholder groups to deliver solar projects that both power the way Kiwis live and empower the regions we operate in.

Lodestone Energy Limited was New Zealand's first utility-scale solar generation company. It was founded in 2019 with a vision to help the national effort to decarbonise the energy sector. Lodestone Energy aims to contribute a substantial amount of solar production the country's electricity market and be the leader in bringing solar-based energy contracts to customers.

Lodestone's team are electricity market experts who have developed all kinds of renewable energy projects including wind, geothermal and small hydro in New Zealand, Australia, Canada, and the United States.

Lodestone is 100% New Zealand owned and operated, backed by some of Aotearoa's most prominent investors. We're doing this by Kiwis, for Kiwis, to get Aotearoa moving towards its renewable energy goals.

PUBLIC COMPANY QUALITY GOVERNANCE

Lodestone has been established as long-term player in the New Zealand electricity market. Building a quality board of directors ensures the governance structures are in place to take the long view on New Zealand electricity.

Gary Holden
Managing Director

Jack Matthews
Chair

Guy Haddleton
Director

Sam Morgan
Director

Joanna Perry
Independent Director

Will Thomson
Director

Susan Paterson
Independent Director

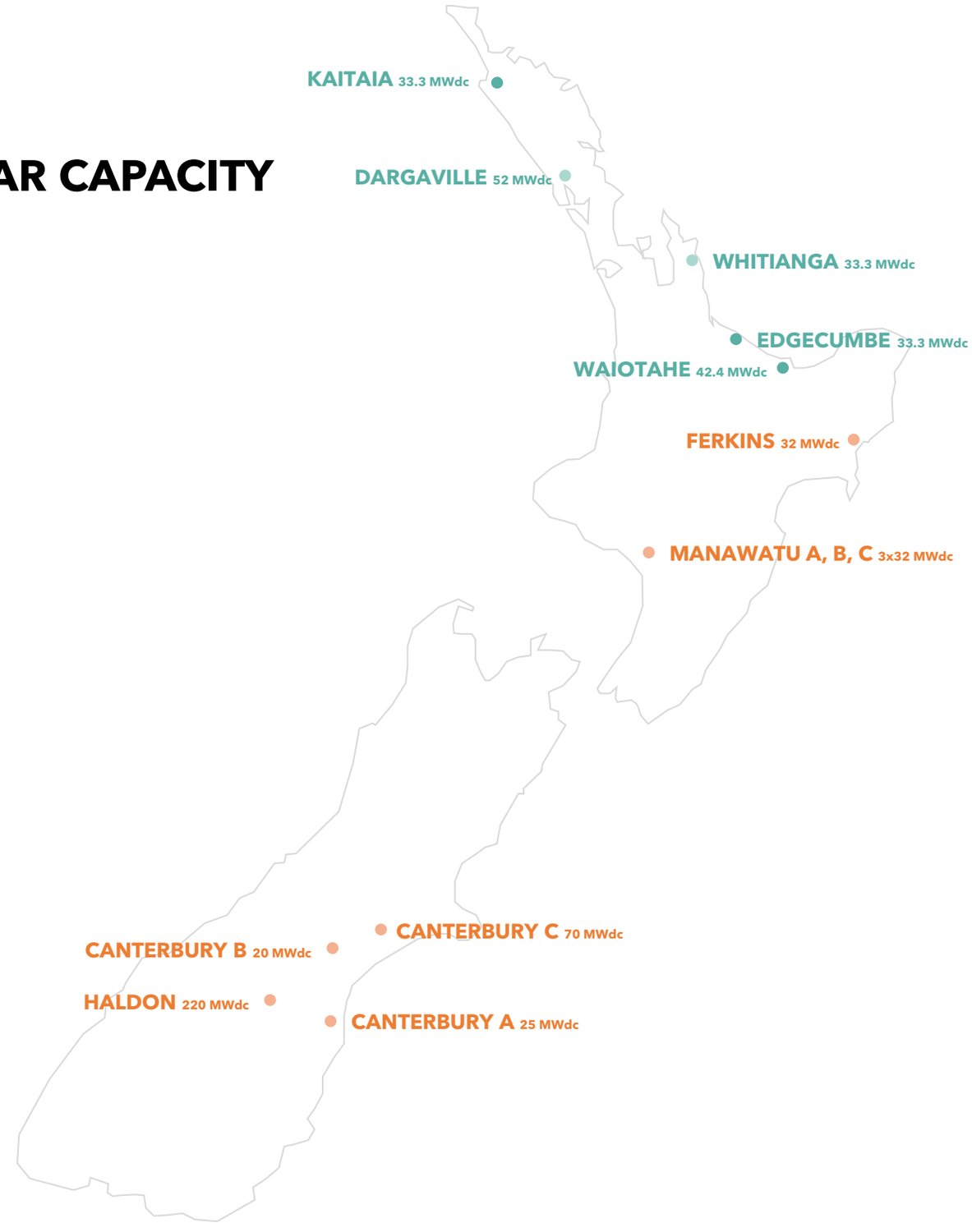
RAPIDLY BUILDING NEW ZEALAND'S SOLAR CAPACITY

Our first five farms are located in Kaitaia, Edgecumbe, Waiotahe, Whitianga and Dargaville, with construction complete in Kaitaia, Edgecumbe commissioning underway and Waiotahe under construction. Whitianga and Dargaville are due to commence construction after winter 2024.

By harnessing the power of the sun we'll be generating 310GWh of renewable energy across the first five farms, enough to power about 50,000 homes.

Lodestone is continuing to invest in further expansion opportunities across Aotearoa as part of its second phase of utility-scale solar projects. Lodestone Energy recently announced an eight site solar farm development partnership with HES Aotearoa (HESA), a joint venture formed by Hive Energy, Ethical Power, and Solar South West.

The Warehouse Group and Lodestone Energy also recently signed a historic long-term agreement that will see more than 260 sites across Aotearoa become powered by Lodestone Energy's new solar plan as early as 2026.



GENERATING ELECTRICITY AND FEEDING PLENTY OF HAPPY SHEEP!

Kohira is now fully operational and supply electricity to the grid. A good example of agrivoltaics in action with sheep grazing between panels.

Sheep grazing

Trackers tilting to 55° to capture morning sun

KOHIRA AERIAL

Aerial view of the Kohira

SITE CONSTRUCTED, COMMISSIONING NOW

Edgecumbe's ground-breaking ceremony for the 32.2 MW_{DC} site was held in April 2023 with neighbours, community consultants and local iwi Te Rūnanga o Ngāti Awa. The site is now generating electricity and will be fully commissioned in a few weeks.

Edgecumbe ground-breaking ceremony

EDGECUMBE UPDATE

Aerial drone photo of construction Edgecumbe at dawn

CONSTRUCTION UNDERWAY

The 43MW$_{DC}$ site construction is well underway. A ground-breaking ceremony was held in December 2023 with neighbours, community consultants and local iwi Te Ūpokorehe. This site will be generating in October 2024.

Photos of Waiotahe early works – November 2023

Waiotahe tree planting

CONSTRUCTION UNDERWAY

Significant progress since construction commencement in October 2023 with crews nearing completion of the piling and tracker assembly.

Photos of Waiotahe site works – March 16, 2024

CONSTRUCTION UNDERWAY

Photos of Waiotahe site works – February 21, 2024

CONSTRUCTION UNDERWAY

Photos of Waiotahe site works – March 29, 2024

CONSTRUCTION UNDERWAY

Photos of Waiotahe site works – April 18, 2024

KEY FACTS

SOLAR RESOURCE

MacKenzie country is a tier one solar resource in New Zealand that enjoys long, clear sunny days.

FLAT, OPEN GROUND CONDITIONS

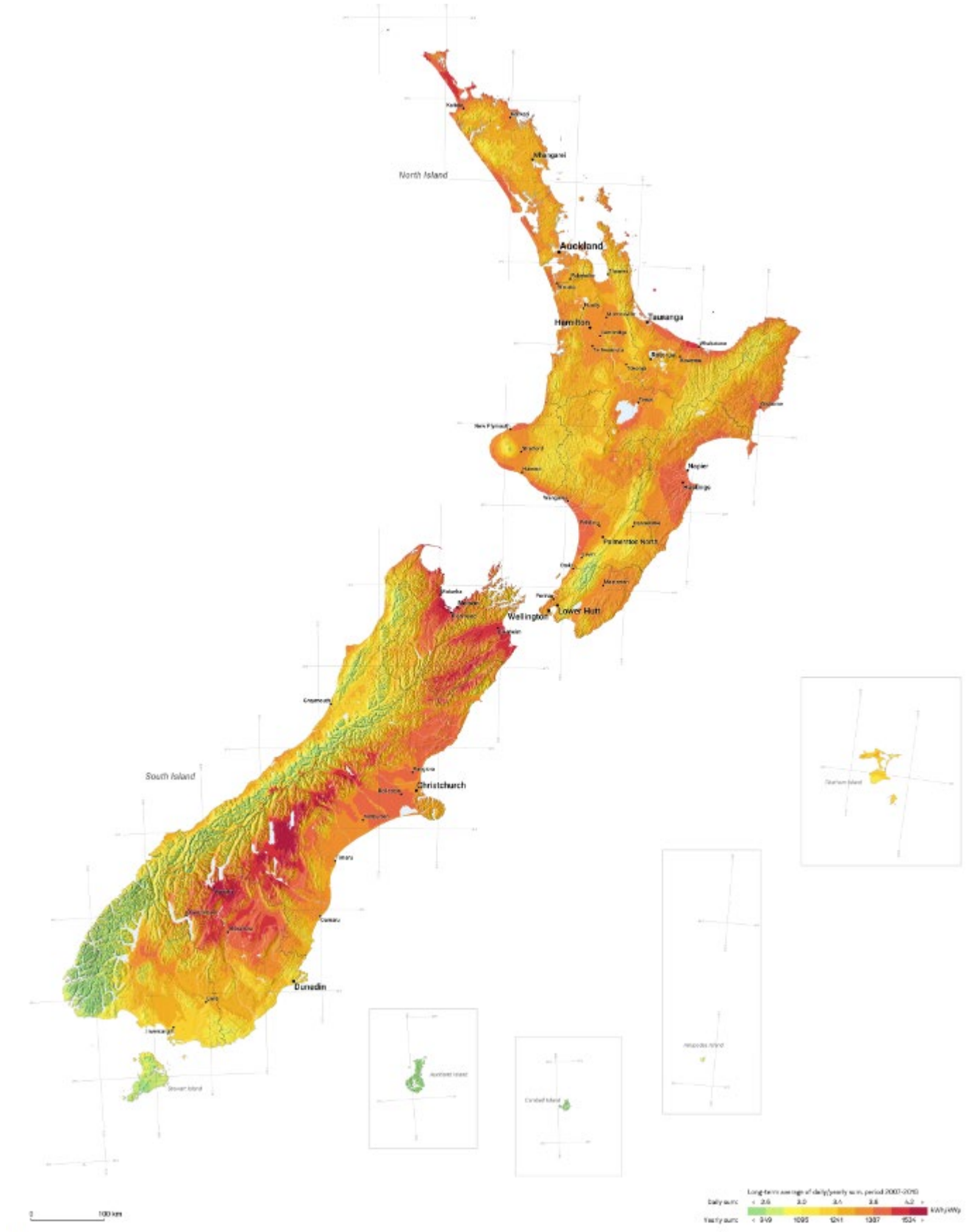
Wide open, flat spaces are best suited for solar development. This site will require no bulk earthworks because of the easy contour.

TRANSMISSION INFRASTRUCUTRE

This region has substantial 220kV transmission infrastructure to support the previous hydro development.

OTHERWISE UNPRODUCTIVE LAND

The site currently has no productive use and is a particularly barren site relative to the rest of MacKenzie country



KEY FACTS

>35-YEAR LIFE

Solar photovoltaics are a solid-state energy generator with no moving parts. With gradual panel degradation a utility-scale solar project should have a useful life in excess of 35 years. Solar panels are warranted to produce 83% of year 1 power in year 30.

LOW VISUAL IMPACT

At less than 3.5m peak height, solar structures are smaller than many buildings and less impact than commercial glasshouses. Planting can be used where necessary to limit visual impact.

LIMITED GROUND DISTURBANCE

Flat sites are preferred to eliminate need for cut/fill reducing earthworks to trenching of about 100 meter / MW. Piles are expected to be driven.

QUIET, RELIABLE OPERATION

With only the tracking system moving, solar farms have little or no audible impact on neighbours.

NO WATER USE / DISCHARGE

Panels will be cleaned by heavy rain events. With large spacing between rows and no ground fully covered, stormwater discharge is effectively unchanged.

REDUCED NODAL POWER PRICE

Distributed generation reduces the cost of electricity wherever deployed. Solar has the added benefit of daytime production, which lowers price during the most expensive hours of the day.

CONSTRUCTION

250 – 350 PEOPLE ON SITE

The construction of a solar farm is like establishing a temporary outdoor assembly line. Majority of the workforce are unskilled labourers and creates good opportunity for grassroots community engagement.

14-18 MONTH CONSTRUCTION

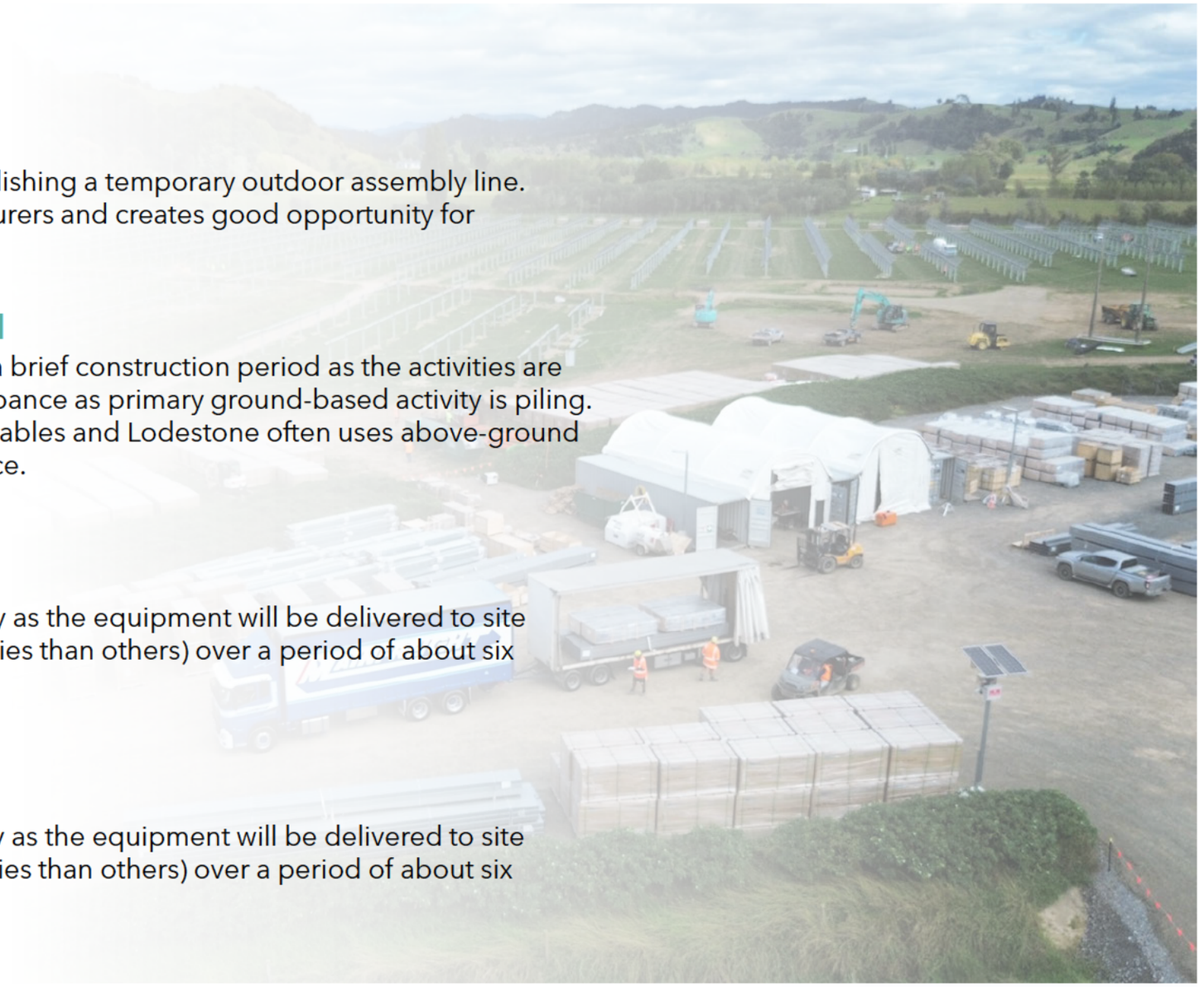
A site of this scale will be constructed over a brief construction period as the activities are quite simple. There is limited ground disturbance as primary ground-based activity is piling. There will be limited trenching for burying cables and Lodestone often uses above-ground cabling to further reduce ground disturbance.

1,150 CONTAINER DELIVERIES

This will result in about 10 deliveries per day as the equipment will be delivered to site gradually (some days will have more deliveries than others) over a period of about six months.

1,150 CONTAINER DELIVERIES

This will result in about 10 deliveries per day as the equipment will be delivered to site gradually (some days will have more deliveries than others) over a period of about six months.



POSITIVE EFFECTS

REDUCED ENERGY COSTS

New Zealand has nodal electricity prices, which change between regions based on how much it costs to deliver electricity to that region. Adding local generation reduces the cost of electricity in the region for all users.

INCREASED SELF SUFFICIENCY

Local generation improves the resiliency of the region. Solar is useful as it produces energy during the daytime, however it is not 100% predictable and can miss the evening rush for electricity in the winter. We will be looking to add battery storage in the future to provide 100% predictable electricity. Lodestone solar projects are designed to meet the local electricity demand of the region during the daytime hours, which will reduce pricing.

NATIONALLY SIGNIFICANT ASSETS

Utility-scale solar generation will be key to replacing gas and coal plant retirements as New Zealand works towards 100% renewable electricity.

RELIABLE DAYTIME ENERGY

Solar power is a key component of Aotearoa reaching 100% renewable as it produces valuable and predictable daytime and summertime electricity. Solar is a valuable complement to the surrounding hydro resource.

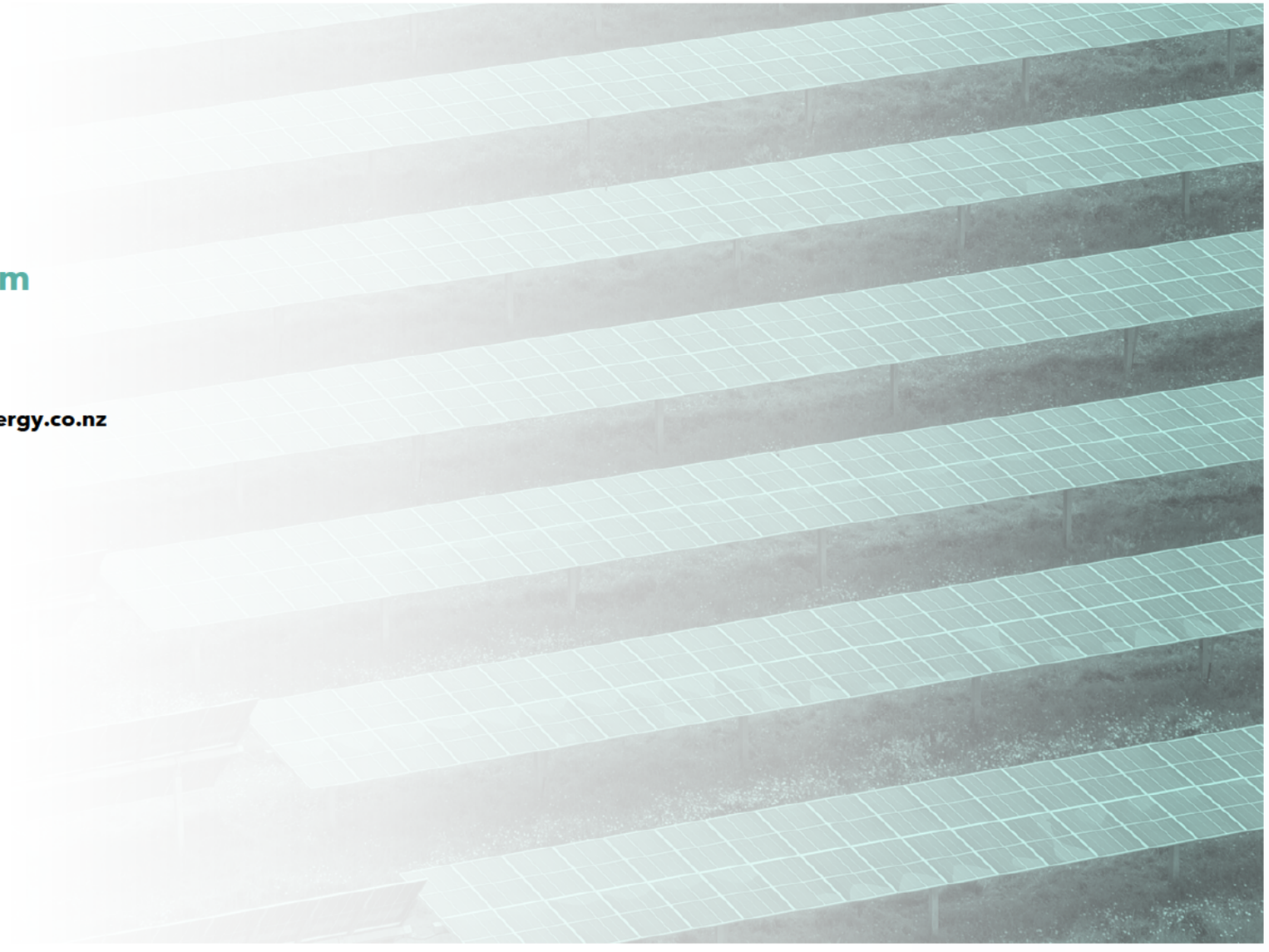
THANK YOU FOR YOUR TIME

Daniel Cunningham

GM, Development

021 228 7287

dcunningham@lodestoneenergy.co.nz



From: Gail T Tipa
To: dcunningham; "Justin Tipa"
Cc: [redacted]
Subject: RE: Haldon Station venture
Date: Wednesday, 7 February 2024 11:05:28 am

Kia ora Justin

You choose. From the dates offered by Daniel, only the 6th and 14/15 is out for me.

Gail

From: Daniel Cunningham [redacted]
Sent: Tuesday, January 23, 2024 4:34 PM
To: 'Justin Tipa' [redacted]
Cc: [redacted]
Subject: RE: Haldon Station venture

Kia ora Justin,

Paddy forwarded your response and asked me to coordinate given Gary and I will be travelling down from Auckland while Paddy is largely available throughout the month.

We could make the following days work:

- March 6
- March 14, 15
- March 18, 19
- March 27, 28, 29

Please let me know a suitable time if any of those days work. We will arrange travel once we have a time pencilled in.

Nga mihi,

Daniel Cunningham
GM, Development
M: [redacted]

From: [redacted]
Sent: Monday, 22 January 2024 1:51 pm
To: Edward <[redacted]
Cc: Daniel Cunningham [redacted]
Subject: FW: Haldon Station venture

From: Justin Tipa [redacted]
Sent: Monday, 22 January 2024 10:01 AM
To: [redacted]

Subject: Re: Haldon Station venture

Kia ora Paddy

Thank you for your patience while I get back to you.
Do you have any dates in March that work for you?
I have included Gail Tipa from Te Rūnanga o Moeraki who will accompany me.
I have also included Jacinta from the Moeraki Rūnanga office to help coordinate a date.

Ngā mihi

Justin Tipa

Kaiwhakahaere i Te Rūnanga o Moeraki
[redacted]

On Fri, 15 Dec 2023 at 21:17, [redacted] wrote:

> Hi Justin
> Thank you for responding to me ,we would be very happy to host you on Haldon station and show you our business .
> If you would like to name a date that suits I will make it work .If possible I would like to invite along a representative of the group we are working with on this new venture .
> Again thank you for your interest and hope to hear from you soon .
> Regards Paddy Boyd
>
> ---
>
> **From:** Justin Tipa [redacted]
> **Sent:** Friday, 15 December 2023 1:24 PM
> **To:** [redacted]
> **Subject:** Re: Haldon Station venture
>
> Kia ora Paddy,
>
> Thanks for making contact, Andy mentioned you would be in touch.
> I am happy to have a discussion.
> Would it be possible to meet you on farm?
>
> Ngā mihi
>
> **Justin Tipa**
>
> **Kaiwhakahaere i Te Rūnanga o Moeraki**
> [redacted]
>
> On Tue, 12 Dec 2023 at 12:06, [redacted] wrote:

Hello Justin
You will not know me directly but I have been put in contact with you through Andy MacFarlane .
My name is Paddy Boyd and I am the manager/director of Haldon Station in the Mackenzie Basin .
I have been managing this property for many years and as we have continued to maintain it's future and care for the land , we have ventured into several development projects .
Each time we have started into any of these bigger projects we have always been in contact with any interested parties to seek any discussion required .
In the past it had been with Patrick Tipa , but I am led to believe that you are the one to contact going forward .
Over the last few years we have installed several pivot irrigators to make the Station more resilient to the extreme dry years and give us the revenue to continue to care for the whole property .
In doing so we have had to install diesel powered motors to source and drive the water systems and I am not happy to continue using fossil fuels when we have other alternatives around us .
To this end we have been investigating the use of sola power to replace the fossil fuels and found that this is a quiet a good possibility so are continuing to look into this .
This would involve erecting a sola farm on the property of some size that would make the whole thing viable , and that is where I would appreciate a discussion with you in your role if you felt it was appropriate .
Kind Regards Paddy Boyd .

From: Daniel Cunningham
To: Greg Carson
Subject: RE: Haldon Solar Farm
Attachments: image001.png
image002.png
image003.png
South Island Solar Projects.msg

Hi Greg,

Thanks for coming to visit and hear about our plans! I've sent a note to Michael this morning (attached) on process from here and will certainly keep you up to speed on any consultant studies as we finalise.

Nga mihi,

Daniel Cunningham
GM, Development
[redacted]

From: Greg Carson [redacted]
Sent: Friday, 7 June 2024 11:10 am
To: Daniel Cunningham [redacted]
Subject: Haldon Solar Farm

Duncan

It was good to catch up on Wednesday to discuss the proposed Haldon solar project.

You mentioned that in the coming months you will be doing some studies (ecological, landscape, etc.) to support your consent applications. Can you please let us know when these may be on as it may be possible and/or useful for representatives from Moeraki to attend some of these to better understand the project.

Thank you

Greg

Greg Carson
[redacted]
Project Manager - Whiria te Waitaki
Waea Pūkoro: [redacted]
www.aukaha.co.nz