Response ID ANON-URZ4-5FBG-S

Submitted to Fast-track approval applications
Submitted on 2024-05-03 11:54:41

Submitter details

Is this application for section 2a or 2b?

2A

1 Submitter name

Individual or organisation name:
Eastland Generation Limited

2 Contact person

Contact person name:
Ben Gibson

3 What is your job title

Job title:
Strategic Projects Manager

4 What is your contact email address?

Email:
s 9(2)(a)

5 What is your phone number?

Phone number:
s 9(2)(a)

6 What is your postal address?

Postal address:

s 9(2)(a)

7 Is your address for service different from your postal address?

No

Organisation:

Contact person:

Phone number:

Email address:

Job title:

Please enter your service address:

Section 1: Project location

Site address or location

Add the address or describe the location:

660 Paroa Road, Tolaga Bay

File upload:
Site Location Plan.pdf was uploaded

Upload file here:
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Do you have a current copy of the relevant Record(s) of Title?

Yes

upload file:
Record of Title.pdf was uploaded

Who are the registered legal land owner(s)?

Please write your answer here:

The registered legal landowners are the Proprieters of Mangaheia No.2D.

Detail the nature of the applicant's legal interest (if any) in the land on which the project will occur

Please write your answer here:

The Applicant has an exclusive agreement with the land owner for the development of the solar farm on the applicant's land and includes the option to enter into a lease for the construction and operation of the solar farm.

As part of the project development agreement, the Applicant will enter into a lease over the land. The lease contains all the land rights needed to construct and operate the project for 30 years.

Section 2: Project details

What is the project name?

Please write your answer here:
Tolaga Bay Solar Farm

What is the project summary?

Please write your answer here:

The construction, operation and maintenance of a solar farm, with an installed capacity of approximately 11.7 MW located in Tolaga Bay, New Zealand. The solar farm will also include the ability to incorporate 1 battery energy storage systems (BESS) which may be installed at a later date. The solar farm will connect to the local grid via Firstlight Network's electricity distribution network which is in close proximity to the site.

What are the project details?

Please write your answer here:

The proposal is to construct, operate and maintain a solar farm with an installed capacity of approximately 11.7 MW solar photovoltaic (PV) in Tolaga Bay Township, New Zealand, for the purpose of providing electricity to the local grid.
The exact infrastructure (specifications, numbers of components etc.) will be confirmed as part of the detailed design, however, the following provides an approximate list of infrastructure to be included:
• Approximately 34,000 solar panels across an area of 35 Ha with an installed capacity of approximately 11 MW DC. Each panel measures approximately 2.384 metres long, 1.303 metres wide and 35 mm deep.
• Panels will be installed in north facing rows with the exact orientation and mounting degree to be confirmed during final design. The rows are made up of sets of 'framing tables' which will be approximately 20m long. The framing tables are pile driven into the ground to a depth to be determined from geotechnical investigations.
• The exact spacing of panels will be confirmed as part of the detailed design but is typically between 2m and 4m.
• Cabling will connect the panels to one another and, at the end of each row will connect to a DC combiner box of approximately 840mm x 640mm x 300mm. Cabling will then provide a connection between the DC combiner boxes at the end of row to the central inverters and the potential Battery Energy Storage System (BESS).
• From there, a connection will then be provided to the local electricity distribution network at a network connection point (NCP) to be identified during detailed design phase. (50kv lines bisect the site). The connection may be overhead or underground and may need to extend into the road reserve.

• Up to 4 Central Inverters each measuring approximately 3 metres L x 2 metres W x 2.2 metres H will also be placed on site and convert the direct current (DC) from the solar panels to an alternating current (AC) for connection to the local network.
• Up to 1 x 4 MW BESS will also be located in proximity to the central inverters. The BESS unit has the capacity to store up to 12 MW hours.
• A small site office/maintenance building will be erected on the site, measuring approximately 6.0 metres L x 2.39 metres W x 2.4 metres H.
• A 2m high deer-type security fence will be located around the perimeter of the solar farm.
• Security lighting and cameras will be constructed on a pole or poles around the central inverters. Lighting will be installed so as to avoid light spill beyond the project area.
• Water tanks will be considered for the primary purpose of firefighting.
• Enabling earthworks will be required. Enabling earthworks will provide for vehicular access and tracking, minor site levelling (if required for buildings)

and cable trenching.
• Farming, specifically sheep grazing, will continue around the panels.
• Solid discharge to land of clean fill to raise the land above flood levels might be required.
• In addition to the construction/installation and maintenance of the infrastructure described above, the following activities may be required: Storage/use of Hazardous Materials (associated with the BESS)
• Restoration work and mitigation/landscape planting
• Land use (renewable electricity generation) not provided for in the District Plan.
• Signage
• Water takes
• Discharge of stormwater
• Works with contaminated land

Describe the staging of the project, including the nature and timing of the staging

Please write your answer here:

No staging is proposed.

What are the details of the regime under which approval is being sought?

Please write your answer here:

• Resource Management Act 1991

Land Use, Discharge Consents
While unlikely to be required, there is a possibility that an Archaeological Authority under the Heritage New Zealand Pouhere Taonga Act 2014.

If you seeking approval under the Resource Management Act, who are the relevant local authorities?

Please write your answer here:

Gisborne District Council

What applications have you already made for approvals on the same or a similar project?

Please write your answer here:

N/A

Is approval required for the project by someone other than the applicant?

No

Please explain your answer here:

Electricity Industry Participation Code 2010 (Code)
The connection of small-scale distributed generation (SSDG), such as the Tolaga Bay Solar Farm, to a distribution network is regulated under Parts 1 and 1A of Schedule 6.1 of the Code.
Eastland Generation is required to make a distributed generation connection application to Firstlight Network prior to making connections to the existing electricity network under Part 6 of the Electricity Industry Participation Code (the Code).
Eastland is in the process of making this application and it will inform the network connection requirements and design, including any potential upgrades to the local network. This is a statutory process to enable the connection of distributed generation to lines company networks and is expected to be procedural and non-contentious.
There are no designations or resource consents required by other parties.

If the approval(s) are granted, when do you anticipate construction activities will begin, and be completed?

Please write your answer here:

• Detailed design
Assess the land available for the development with Eastland and the landowners and identify any constraints including wetlands, water courses, culturally significant areas, land to be set aside for other agricultural purposes, access ways and points of connection to the local electricity distribution network.
2. Develop site plans and drawings including topographical maps and models
3. From a recommended list of equipment types (ie panels, inverters and support structures), undertake detailed solar modelling to determine the electrical capacity of the solar farm and optimise the design and layout of the panels to determine the best layout for the station. This will also include consideration of battery storage systems, adding to the station capacity and resilience if it were isolated form the network.
4. Undertake a detailed network connection study to inform the design of the connection and any associated upgrades of the local network. This work will be done in collaboration with First Light Network Limited.
5. Undertake detailed hydrological and geotechnical investigations to inform the design of the structures supporting the panels. This is especially important in potential flood
prone areas such as Uawa to ensure that the system has sufficient mitigations and strength to resist damage in flood events.

6. From these studies, the station description will be developed that support the resource consent application and will describe the layout and design of the station, including drawings, plans and required earthworks.
7. Further detailed design work will then be undertaken to provide equipment specifications and detailed construction drawings necessary for procurement. This phase of the design will also consider the constructability and maintenance of the plant.

• Procurement
Eastland will undertake procurement based upon the outcomes of the design phase and use forms of contract from previous construction projects, modified to suit the solar projects.
All tender packages will include necessary specifications for the equipment as well as quality control and inspection requirements. Contracts will include appropriate commercial terms including performance bonds and liquidated damages where necessary.
Eastland will typically tender the project in packages as follows:
1. Panels – supply of solar panels for the station. Due to the nature of the panels, tenders will be sought from international suppliers and performance guarantees will be required. Eastland will also conduct due diligence on the manufacture of the panels to ensure that they adhere to best industry practices in terms of sourcing of materials, quality and ethical working conditions.
2. Supports/tables – supply of the structures that support the panels and may include tilting or tracking mechanisms. These will also be sourced from international suppliers and be required to meet with applicable New Zealand engineering standards.
3. Inverter(s) – supply of the inverter. This will also be sourced from international suppliers and be required to meet with applicable New Zealand engineering standards.
4. Electrical balance of plant – the supply of additional electrical equipment including
control systems, metering and any local transformers. This may be split into several smaller packages and be sourced from local suppliers.

For the construction phase, Eastland will consider the capacity and capability of local contractors to execute the work packages and tender them appropriately. General packages of construction work will include:
1. Earthworks – site preparation, land contouring, access roads, fencing, drainage and stormwater controls. This package may also include the foundations for the inverters, control room and electrical balance of plant. Tenders will typically be sought from local contractors with experience in this scale of work. A separate tender would be sought for the supply and construction of a control room.
2. Structures – installation of the piles and panel supports, including any tiling or tracking mechanisms, fitting of the panels to the tables and running cables. Tenders will typically be sought from local contractors and piling machinery may be included or hired.
3. Electrical installation – Installation, testing and livening of the inverter, control systems, metering, communications and HVAC systems. Given the specialist nature of this work, tenders would be sought from national and local contractors.
4. Network connection – the design and build of the network connection and any associated upgrades of the network. This will include associated equipment and the construction and installation of the connection. This will be sourced from local contractors with the capability to execute this work.
Eastland will undertake the project management, scheduling and quality control role through out the project using systems and processes developed from previous renewable energy generation projects.
Eastland will be supported by technical specialists such as Jacobs through the construction process and will also undertake independent quality control checks of critical plant and equipment before equipment is shipped.

• Funding
The project will be funded by Eastland Generation Ltd.

• Site works commencement
Eastland expects that following the award of Resource Consent:
• Detailed design, specification and preparation of tender documents – 3 months
• Procurement and award of conditional contracts – 3 months
• Final Investment Decision (FID) to proceed – 6 months after award of resource consents
• Earthworks – 3 months after FID
• Station construction – 12-18 months after completion of earthworks
• Completion
•
Project Commercial Operations Date (PCOD) – 21-27 months after award of Resource Consents.

Section 3: Consultation

Who are the persons affected by the project?

Please write your answer here:

Landowner
The landowner, the Proprieters of Mangaheia No.2D, has been involved in the site selection and definition of land area constraints. Regular meetings are held with the Landowner along with regular updates on project progress. The Landowner supports this application being made.
Local Authorities

The local authorities are:
• Gisborne District Council

Iwi Authorities

The relevant iwi authorities are:

• Te Aitanga A Hauiti Iwi Mana Kaiteki
• Ngati Porou Iwi
There are no Customary marine title groups, applicants under the Marine and Coastal (tukutai Moana) Act, Ngā Hapū o Ngāit Porou affected by this proposal. There is also no land to be acquired under the Public Works Act 2011.

Detail all consultation undertaken with the persons referred to above. Include a statement explaining how engagement has informed the project.

Please write your answer here:

Local Authorities

The local authorities associated with this proposal is Gisborne District Council which is a unitary authority with both Territorial and Regional functions. As with previous projects in this area, Eastland intends to work closely with GDC to ensure they are informed of the project and that where possible, conditions are agreed and incorporated in any consent.

Iwi Authorities

Eastland is committed to working alongside Te Aitanga A Hauiti Mana Kaitieki from conceptualisation until end-of-life of the project. Eastland has been engaging with the Maori landowners and will expand this to the wider Iwi once a finalised concept plan is available for discussion.

Adjoining Neighbours
Eastland will undertake consultation with adjoining property owners, including (but not necessarily limited to):
• Holding community meetings to introduce the project and invite feedback;
• Where requested, face to face or virtual meetings/phone calls with adjoining owners/occupiers
and other interested stakeholders;
• Publicly available information on Eastland's social media platforms.

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Describe any processes already undertaken under the Public Works Act 1981 in relation to the land or any part of the land on which the project will occur:

Please write your answer here:

NA

Section 4: Iwi authorities and Treaty settlements

What treaty settlements apply to the geographical location of the project?

Please write your answer here:

Ngāti Porou's area of interest extends over the geographical location of the project in Uawa. Ngāti Porou and the Crown signed a Deed of Settlement on 22 December 2010. This settlement was legislated as the Ngāti Porou Claims Settlement Act 2012.

Though the rohe of Te Aitanga A Hauiti extends over the subject site, the Hapu has not undergone any relevant settlement process.
The Ngāti Porou settlement includes; an agreed historical account, a Crown acknowledgement and apology, and varying levels of cultural, financial and commercial redress. Key principles and provisions of this particular settlement , including any ongoing processes, are provided below.
Ngāti Porou Claims Settlement Act 2012
Relevant principles and provisions of the Settlement include:
• The promotion of relationships between Ngāti Porou and Crown agencies, local authorities, non-governmental organisations and specified entities;
• Deeds of recognition obliging the Crown to consult with Ngāti Porou on specified matters and Ministers to have regard to Ngāti Porou's views in decision-making.
• The protection and enhancement of the conservation values associated with the places and sites owned by the Crown within Ngāti Porou area of interest.
• The vesting of 15 sites in Ngāti Porou.
• Statutory acknowledgements over three areas including the Uawa River and its tributaries (upstream of the Coastal Marine Area); and
• The express declaration of Te Aitanga A Hauiti being a hapu under the meaning of Ngāti Porou Iwi and thus benefitting under the Settlement Act.
There are no vested sites, statutory acknowledgement areas, or overlays relevant to the subject site. Further, no private land is directly affected under the Ngāti Porou Claims Settlement Act.

Are there any Ngā Rohe Moana o Ngā Hapū o Ngāti Porou Act 2019 principles or provisions that are relevant to the project?

No

If yes, what are they?:

NA

Are there any identified parcels of Māori land within the project area, marae, and identified wāhi tapu?

Yes

If yes, what are they?:

Part Lot 7 DP 1452, Part Lot 1 DP 2299, Lot 2 DP 2299 and Lot 3 DP 2299 are Maori Freehold Land. There are no marae or known waahi tapu located within the boundaries of the site.

Is the project proposed on any land returned under a Treaty settlement or any identified Māori land described in the ineligibility criteria?

No

Has the applicant has secured the relevant landowners' consent?

Yes

Is the project proposed in any customary marine title area, protected customary rights area, or aquaculture settlement area declared under s 12 of the Māori Commercial Aquaculture Claims Settlement Act 2004 or identified within an individual iwi settlement?

No

If yes, what are they?:

NA

Has there been an assessment of any effects of the activity on the exercise of a protected customary right?

No

If yes, please explain:

NA

Upload your assessment if necessary:
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Section 5: Adverse effects

What are the anticipated and known adverse effects of the project on the environment?

Please describe:

Eastland Generation have commissioned (through 4Sight and SLR Consulting) preliminary reports which include Planning Feasibility Assessment, Ecological Assessment, Flood Risk Assessment, and Preliminary Site Investigations (Contaminated Land Investigations), these reports are complete and have been utilised to inform this section of the application.
Wetland Delineation and Detailed Flood Risk Assessment are being undertaken to further inform detailed design.

Adverse effects associated with the proposal can be general grouped as follows:
• Landscape and Rural Character Effects
• Ecological Effects
• Cultural Effects
• Archaeological Effects
• Acoustic Effects
• Glint and Glare Effects
• Construction Effects
• Operational Traffic Effects
• Effects on Highly Productive Land
• Hazardous Substances Effects

These matters are addressed in turn in the following paragraphs.

Landscape and Rural Character Effects

In this instance the site is rural and there are very few sensitive land uses in the surrounding environment. Nonetheless consideration of landscape effects will include:
• Consideration of topography and natural screening
• Consideration of existing land modifications, natural features
• Consideration of natural hazards and surrounding land uses

Solar arrays are low lying structures (having a maximum height of 3.2m above ground level) and are spaced in a manner that allows for continued pasture growth, stock grazing and open space. Likewise, the buildings associated with the development are low level single storied flat roof structures not being a dominant feature within the environment.

The boundaries of the site will be completely fenced and it is anticipated that landscape planting will be provided to enhance the visual amenity of the site which will also enhance biodiversity. The design will provide appropriate setbacks along the Paroa Road and Waipurpuru road frontages.

Overall, the landscape design will be developed in a manner that responds to the surrounding environment.
It is anticipated that visual/landscape effects and effects on rural character can readily be managed so as to be very low-low and therefore acceptable.

Ecological Effects

The Uawa Solar Farm site is located within the Waiapu Ecological District. The area is coastal lowland, alluvial flats and is situated between the Mangaheia and Hikuwai Rivers within the Uawa Catchment.
The site is currently utilised for cropping and grazing purposes. The site is cropped during summer and sown with pasture species in winter months. Pasture species within the site include rye grass, clover, scattered dock, dandelion and plantain.

Waipurupuru Stream flows through the site. The tile drained paddocks of the subject site drain to the stream. Fish species present in the stream include Long Fin Eel, Short Fin Eel, Inanga and Bullies. The stream has been highly modified and its ecological values are considered to be low due to the homogenous habitat, regular disturbance of the stream bed (maintenance), and lack of stream shading. There are opportunities to improve ecological values of the stream through stream planting given there it is an important habitat for freshwater fauna. There is no proposal to alter the watercourse. Infrastructure will be located outside of required riparian setbacks.

No wetland areas have been identified within the subject site.
There are two (2) PMAs (WR29 - Parkers Bush, WR30 - Waipurupuru Stream) located along the western and southern boundaries of the site which will not be affected by the site development works with adequate setbacks from these boundaries being implemented.

Whilst a full ecological assessment has not been undertaken (desk top analysis and site walkover only), it is considered potential adverse effects from the construction of a solar farm in this location would be acceptable.

Cultural Effects

Eastland have a proven track record of working closely with Iwi on their renewable's projects, an example of this was the delivery of NZ's first solar farm at Gisborne Airport – Te Ihi o te Ra. Eastland worked closely with the local Iwi so that the desires of Iwi were well represented in the final design including Riparian planting, and the erection of carved Pou around the site, and fencing the stream for stock exclusion purposes. Eastland continues to work closely with Iwi in relation to that project which is now fully operational.

Like the Gisborne Airport example, Eastland will undertake a robust engagement process with iwi Te Aitanga A Hauiti Mana Kaiteki to ensure that cultural values and aspirations are reflected in the final design of the solar farm. Eastland will work with iwi on the development of all aspects of the proposal, including conditions of consent. As such, it is anticipated that cultural effects will be neutral – positive.

Archaeological Effects

There are no known archaeological or waahi tapu sites on the property. There is a small area of Heritage Alert Overlay located in the eastern corner of the site near the Uawa River. The heritage alert layer is used as an early warning system. In assessing consents the determining criteria will be the risk factor and likelihood of damage to archaeological sites.

The applicant may need to obtain an exploratory archaeological authority from Heritage NZ Pouhere Taonga if this part of the site is to be developed.
TRMP Policy C4.1.6 (4) states :
Where it can be demonstrated that archaeological sites will not be adversely affected there is no requirement for a resource consent. Advice will be sought from a suitably qualified and experienced archaeologist once a concept plan is developed and if development works are proposed to be located within the heritage alert overlay.

The site has tile drainage installed and is regularly cultivated with heavy machinery. In the unlikely event an archaeological site or sites are identified as part of this process, these will undergo further archaeological investigation in accordance with the desires of Iwi and in consultation with Heritage NZ Pouhere Taonga. Any identified sites will likely be protected, or if appropriate due to the nature and scale of the site modified or possibly destroyed. The imposition of an accidental discovery protocol will form a condition of consent. Accordingly, it is anticipated that the any effects upon archaeological will be less than minor.

Acoustic Effects

Noise from the solar farm can be broken down into two categories; construction noise and operational noise. Construction noise is addressed in the following section.
Operational noise will be very limited, with the primary source of noise being from the inverters and the BESS. Given that these are located central to the site it is anticipated they will readily comply with the relevant noise standards.

Maintenance and monitoring work will be carried out on a periodic basis (likely weekly) by one-two workers in a utility (or similar), meaning that noise arising from maintenance will be very minimal.

Accordingly, it is anticipated that the operational noise associated with the proposal will be compliant with relevant noise standards.

Glint and Glare Effects
Given the location of the site, the small number of neighbours and screening provided by existing vegetation and topography glint and glare effects are considered unlikely. However, an assessment on the possibility of glint and glare will be undertaken and if required, a full glint and glare assessment will be completed for the proposal. Such an assessment will be undertaken by a suitably experienced and qualified person, utilising best practice approach and standards.

Construction Effects

Construction Traffic
Construction work is anticipated to take 12-18 months.
Construction involves the transport of materials and infrastructure (panels, frames, inverters, BESS) to the site in heavy vehicles. Materials/infrastructure will primarily be transported in containers, which will be placed in a designated laydown area. Approximately 130 containers will be shipped to the over the duration of the construction. A rolling construction methodology is proposed, whereby empty containers will primarily be removed by backfilling trucks delivering new containers. Likewise, some machinery will delivered to site, but will remain there for the duration of works.

It is anticipated that construction staff will commute to the site via car or other light vehicle from Gisborne with a maximum of 30 vehicle movements per day.

Overall, it is anticipated that all l construction traffic will be appropriately managed so as to ensure any adverse effects on the surrounding roading network are minor or less than minor.

Construction Noise and Vibration

As noted above physical construction works are anticipated to take approximately 12-18 months and it is anticipated that the hours of construction will likely occur between 7 am to 5pm, Monday – Saturday (excluding public holidays). The construction phase is anticipated to comply with NZ standards for construction noise and it is not expected that works will be undertaken during public holidays.
Construction and vibration effects can be managed to accord with the TRMP Permitted activity criteria and therefore effects generated from noise and vibration are anticipated to be less than minor.

Earthworks Effects

Earthworks are limited to those required for trenching and levelling of building platforms. There maybe some deposition of fill required for the building platforms of the BESS, transformers and site office. The site is located within land overlay 1 which provides a highly permissive regime in respect to earthworks, subject to an erosion and sediment control plan being in place. All earthworks will be subject to erosion and sediment control measures, including the use of silt fences as appropriate, the minimisation of exposed soil and progressive rehabilitation to ensure there is no run-off to waterways or beyond the boundary of the site.

Dust

Dust will be managed during construction, through a combination of progressive stripping and rehabilitation to minimise exposed soil, the use of water carts or other temporary stabilisation and responding to adverse weather conditions (e.g., high wind) in an appropriate manner. These measures will be set out in the Construction Management Plan.

Operational Effects

The operational effects of the proposed solar farm are very limited, specifically, a technician will visit the site approximately 2-3 times per week to carry out a physical check of the infrastructure. In the initial stages, it is possible additional visits to the site will be required for plant maintenance.
Overall, it is considered that any potential for adverse amenity effects from the operation of the solar farm will be very minor.

Effects on Highly Productive Land

The solar panel mounting structures will be driven into the ground leaving the pasture underneath in place and exposed to both sunlight and rainfall. The site is currently used for cropping and grazing and this productive potential will be retained – noting that both low level cropping and grazing are possible duel uses for the site. However, it is most likely that the land owner (Paroa Station) will continue to graze the site at much the same intensity as it currently is.. At the end of life of the solar panels, the panels can either be unscrewed and replaced, or all infrastructure removed and the land returned solely to pastural use. As such, any adverse effects on the productive potential of the land are considered to be negligible.

Hazardous Substances Effects

The proposal will contain hazardous substances (primarily oil) associated with the inverters and BESS. The volumes of oil associated with the relevant infrastructure are low and are likely to comply with permitted standards. Further, all infrastructure containing hazardous substances are designed to provide both primary and secondary containments in a sealed container. This ensures that oil is not able to migrate from the infrastructure and onto land or into water. As such, any adverse effects from hazardous substances are considered to be appropriately managed.

Conclusion
All potential effects of the proposal can be avoided, remedied or mitigated to an appropriate level.

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Section 6: National policy statements and national environmental standards

What is the general assessment of the project in relation to any relevant national policy statement (including the New Zealand Coastal Policy Statement) and national environmental standard?

Please write your answer here:

National Policy Statement for Renewable Electricity Generation
The National Policy Statement for Renewable Electricity Generation 2011 recognises the national significance of renewable electricity generation activities and provides for the development, operation, maintenance and upgrading of new and existing renewable electricity generation activities, such that the proportion of New Zealand's electricity generated from renewable energy sources increases to a level that meets or exceeds the New Zealand Government's national target for renewable electricity generation.

Eastland have identified the Tolaga Bay site as being well suited and strategic for solar electricity generation due to its proximity to the Tolaga Bay township and coastal communities further north where the provision of solar energy to the existing electric power network will support existing power supply and increase resilience, particular noting that natural events have left these communities cut off from more distant power supplies.

The Tolaga Bay area was adversely affected by Cyclone Gabrielle in 2023 along with many parts of the East Coast, north of Gisborne, cut off from electricity supplies for several days. Locating the solar farm in Tolaga Bay, together with a proposed battery system, provides local, renewable electricity generation in a remote part of the country and supports regional resilience during natural events.

The proposal will result in very low levels of adverse effects due to the rural location and the fact the immediate site location is sparsely populated. Nonetheless, the Applicant will consider ecological enhancements to increase biodiversity, this maybe achieved through landscape planting the details of which will be discussed in partnership with Iwi and the landowners. As such the proposal is considered to be consistent with the objectives of the National Policy Statement for Renewable Electricity Generation 2011.

National Policy Statement for Highly Productive Land (NPS: HPL)

The site is predominately LUC 2 and is therefore classified as highly productive land. The proposal is therefore subject to consideration of the requirements of the NPS: HPL.

Clause 3.9(2) addresses the appropriate use of development of productive land and subsection (j)(i) provides a pathway for the maintenance, operation, upgrade, or expansion of specified infrastructure, on the basis that clause 3.9(3) is satisfied. It is understood that 'new' specified infrastructure is also captured by clause 3.9(2)(j)(i) on the basis of interpretation principles.

Whilst there is no definition of 'specified Infrastructure' within the Tairawhiti Resource Management Plan or the Tairawhiti Regional Policy Statement, the proposed solar farm meets the definition of 'network utility activities' meaning, an activity relating to the generation, transformation and transmission or distribution of electricity and constitutes 'infrastructure that delivers a service operated by a lifeline utility' (as defined in the Civil Defence Emergency Act 2002).

Regarding the consideration of operational or functional need, it is noted that solar farms are most practicably constructed in locations where:
a) The topography is flat to gently sloping; and
b) There is existing electrical infrastructure (substations and/or high voltage lines) in close proximity where a connection is able to be provided; and
c) Soil is appropriate for the driving of piles/ natural hazards are not incompatible with the activity; and
d) Where there is a suitably sized land parcel(s) to accommodate the extent of infrastructure required; and
e) Where the generator is able to obtain an agreement with a landowner or purchase the required land.
These factors have significantly impacted on site selection for this project and contribute to both functional and operational need for the project to locate as proposed.
The NPS-HPL (clause 3.9(j)) only requires that there is either "functional or operational need" (not both) for the specified infrastructure to locate in a particular environment. Nonetheless, there is inevitably some cross over between functional and operational need and the following assessment, while focused on operational need, also addresses some matters (such as potential alternative locations) associated with functional need.

In this instance, the site is located in close proximity to the 50 KV overhead lines (they bisect the site) through which a connection to the local electricity grid is available. The need for renewable energy generation to locate in proximity to existing infrastructure and connect to the grid is recognised by the NPS-REG (Policy C1) as a practical constraint that decision makers must have particular regard to. Eastland Generation have made connection applications for access to the local grid with the First Light Network. Dialogue continues between the parties whilst preliminary assessments of generator and protection in the network reports are completed by First Light.

The surrounding land also comprises a mixture of LUC1-3 land soils, interspersed with other soil types where there are gullies or other significant landscape features (to the west). Therefore, high quality soils are not able to be readily avoided in this instance, in addition there is no guarantee that an alternative, suitable, site would be available to Eastland Generation.
Therefore, it is considered that there is an operational need for the proposal to be located within the environment (being an environment that is comprised of HPL).

In terms of clause 3.9(3) and as assessed previously, the solar panels will be pile driven into the ground allowing sufficient space underneath and around the panels to allow the site to continue to be effectively used for sheep farming, being a continuation of the existing use.

As such, it is considered that any loss of land productivity has been minimised and could be fully reinstated if required.

Some productive land maybe retired for landscape implementation (boundary setbacks and riparian areas), which is consistent with the direction provided in clause 3.9(2)(e).
Lastly, there are no reverse sensitivity effects arising from solar farming within the rural zone. As previously noted, sheep and solar farming are complementary, and productive rural activities on adjoining properties will not impact on the solar farm.

Therefore, the proposal is not contrary to the NPS-HPL.

National Policy Statement on Freshwater Management (NPS:FM)

The National Policy Statement for Freshwater Management 2020 (NPSFM) sets a national policy framework for managing freshwater quality and quantity. It seeks to prioritise the well-being of water bodies and freshwater systems, health and needs of people, and the well-being of communities now and in the future. The policies, relevant to this proposal, seek to ensure there is no further loss of extent of natural inland wetlands, their values are protected, and their restoration is promoted, habitats of indigenous freshwater species and freshwater values are improved.

The ecological assessment including site walkover did not identify any natural inland wetlands. In addition, landscape planting in riparian areas will provide additional habitats for indigenous species and will improve freshwater values of the surrounding catchment. For these reasons, the proposal will not be inconsistent with the NPS:FM.

National Environmental Standards for Assessing and Managing Contaminants in Soil to Protect Human Health (NES:CS) and National Environmental Standards for Freshwater (NES:F)
The relevant provisions of these statutory documents have been considered as part of this proposal and, with regard to the conclusions reached in the adverse effects sections, it is considered that any adverse effects relating to human health and freshwater can be suitably managed to the extent they will not be significant. As such, the proposal is considered to be consistent with these statutory documents.

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Section 7: Eligibility

Will access to the fast-track process enable the project to be processed in a more timely and cost-efficient way than under normal processes?

Yes

Please explain your answer here:

The proposal represents a small-scale solar farm project in the current New Zealand context. There is the potential for public notification of the proposal under 'special circumstances', which would result in delays to the project. In addition, given the relative 'newness' solar technology in New Zealand there is a risk that a lack of expertise and experience both within local government and the community could result in unnecessary delays through the traditional consenting pathways. Under a traditional consenting process, the requirement for doubling of timeframes, public notification and a hearing could result in a processing time of some 200 days (excluding any delays due to further information requests). This time could be at least doubled in the event of an appeal.
Consequently, it is considered likely that the project will progress faster under the Fast Track process than the traditional RMA consenting pathway.

What is the impact referring this project will have on the efficient operation of the fast-track process?

Please write your answer here:

The Applicant is an experienced renewable energy developer, generator and operator. It has experience and knowledge in the construction and operation across Hydro Electric Power Generation, Geothermal Power Generation and Solar Energy. The applicant understand the need to provide complete and robust applications that address all relevant aspects of the proposal. Suitably qualified and experience experts will be engaged to prepare the application(s), allowing for efficient assessment by an expert panel.
Eastland Generation has submitted the Taheke Geothermal Project near Lake Rotoiti via the COVID-19 Recovery (Fast-track Consenting) Act 2020. The project has been accepted for referral and Eastland are awaiting the appointment of an Expert Consenting Panel.

Has the project been identified as a priority project in a:

Central government plan or strategy

Please explain your answer here:

National Policy Statement for Renewable Energy Generation
The National Policy Statement for Renewable Electricity Generation 2011 recognises the national significance of renewable electricity generation activities and provides for the development, operation, maintenance and upgrading of new and existing renewable electricity generation activities, such that the proportion of New Zealand's electricity generated from renewable energy sources increases to a level that meets or exceeds the New Zealand Government's national target for renewable electricity generation.
Rautaki Hanganga o Aotearoa, the New Zealand Infrastructure Strategy and The Infrastructure Action Plan
The Rautaki Hanganga o Aotearoa, the New Zealand Infrastructure Strategy (Strategy) sets out actions New Zealand needs to take to ensure the infrastructure system meet the challenges of a growing population and environmental factors, such as climate change, over the next 30 years.

The Infrastructure Action Plan, May 2023, sets out a work programme in response to identified challenges and opportunities in the Strategy around the provision of efficient, equitable, resilient and sustainable infrastructure system.
The strategy recognises that electricity generation capacity needs to increase by 170% and that a major energy transition is required to meet net-zero carbon emissions targets (p. 9) and to enable well-functioning cities and energy reliant industry. While the action plan includes an Action (11.2.1) to accelerate development of new renewable electricity generation across the economy.

Will the project deliver regionally or nationally significant infrastructure?

Regional significant infrastructure

Please explain your answer here:

The NPS-REG recognises the need to develop, operate, maintain and upgrade renewable electricity generation as a matter of National Importance. The project will deliver approximately 11MW of renewable energy to the local grid and the inclusion of BESS will provide flexibility in the release of that energy. This will contribute to the supply and resilience of electricity within the Tairawhiti Region and particularly to vulnerable nearby communities. .
The generation of electricity that will be fed into the local grid which is supported by the Built Environment, Energy, and Infrastructure chapter of the RPS.
The RPS recognises that nationally, the current pattern of energy use is unsustainable for economic and environmental reasons, there is a need to conserve finite fossil fuel energy resources and to make the transition to more sustainable sources of energy. (B3.1)
The RPS sets out a number of objectives and policies which recognise there is a responsibility by Council to promote energy efficiency and the use of renewable energy resources. (B3.2)
To achieve the efficient use of energy in a way that will help to ensure the continued availability of energy to meet the needs of the community, without compromising the sustainable management of natural and physical resources. (B3.2.1)
The Gisborne region, like other regions within New Zealand, is highly dependent on non-renewable fossil fuels for its energy needs. Fossil fuels (e.g. petroleum, gas, coal) are finite, expensive and there is a significant environmental cost associated with their use. In contrast, electricity usage in the region relies to a large extent on a renewable energy source; hydroelectric power. Solar, wind, biomass, crops and wood and hydro-electric power generation are the most promising sources of renewable energy for the future.(B3.3)
The objectives and policies also recognize that the progressive development and use of cost-effective and sustainable sources of renewable energy within the Gisborne region should be encouraged (by the Council) to support Government initiatives on renewable energy (and where it is shown that renewables projects are cost effective, technically viable and the effects of the development are acceptable. (B3.3.2)
Accordingly, the proposal provides for significant renewable electricity generation benefiting the Tairawhiti Region, it is considered to provide both national and regional benefits.

Will the project:

contribute to a well-functioning urban environment

Please explain your answer here:

A well-functioning urban environment is a term defined by the National Policy Statement for Urvan development in Policy 1 of the same. It includes urban environments that:
Support reductions in greenhouse gas emissions; and
Are resilient to the likely current and future effects of climate change.
project will contribute to a well-functioning urban environment by providing a new secure renewable energy supply within a the Tairawhiti Region, resulting in a reduction in greenhouse gas emissions from fossil fuel sources. The project will also benefit local and national urban environments as follows:
Local:
- Increase electricity security
- Support economic growth
- Provision of an energy supply building local resilience

National:
- Reduce North Island reliance on hydro power reducing risk in drier conditions
- Diversification of New Zealand’s energy offering

As such, the proposal is considered to have both direct and indirect benefits on the wellbeing and functioning of urban environments locally and nationally.

Will the project deliver significant economic benefits?

Yes

Please explain your answer here:

Eastland expect there to be economic benefits during both the construction and operational phases:
- Construction – The construction phase will run for approximately 12-18 months and require a skilled and semi-skilled workforce to build the station. This workforce will predominately be sourced from the Tairawhiti region and around Tolaga Bay, areas with low levels of employment. Installation of the support structures and panels will require a team of 10-15 people working for the majority of the construction period on assembly. These people will be sourced locally and learn skills that are potentially transferable to other industries and projects.
- Operation – The operation phase will require less personnel, but local people will be needed to regularly inspect the station and maintain it.

Will the project support primary industries, including aquaculture?

No

Please explain your answer here:

NA

Will the project support development of natural resources, including minerals and petroleum?

No

Please explain your answer here:

NA

Will the project support climate change mitigation, including the reduction or removal of greenhouse gas emissions?

Yes

Please explain your answer here:

Solar panels generate electricity without emitting greenhouse gases or other pollutants. Unlike fossil fuels, which release carbon dioxide (CO2), methane (CH4), and other harmful gases when burned, solar power is clean and renewable. By harnessing the power of the sun, solar energy reduces our reliance on fossil fuels like coal, oil, and natural gas for electricity generation. Burning these fuels is a major source of greenhouse gas emissions. Although in NZ the majority of electricity generation – 80% -85% is from renewable energy sources such as hydropower and wind. Other energy sources such as those required for transportation purposes rely heavily on the consumption of fossil fuels.
The Tolaga Bay Solar Farm will generate an annual average of 37, 245 MWh which is enough to provide for the annual needs of 5,750 Tairawhiti homes.
While there are emissions associated with the production, transportation, and installation of solar panels, these are typically much lower than those associated with fossil fuel-based electricity generation. As solar technology improves and becomes more efficient, the emissions associated with its lifecycle continue to decrease. Solar energy can complement other renewable energy sources like wind , geothermal energy and hydropower, providing a diversified and sustainable energy mix.
Overall, the widespread adoption of solar energy is a crucial component of efforts to mitigate climate change by reducing greenhouse gas emissions and transitioning to a cleaner, more sustainable energy future.

Will the project support adaptation, resilience, and recovery from natural hazards?

Yes

Please explain your answer here:

Tairawhiti continues to recover from the effects of extreme weather events such as Cyclone Gabrielle (Feb 2023). The provision of solar farms in a region like Tairawhiti will provide energy security. For hazard prone isolated communities of the East Coast it is imperative that alternative power sources are developed for social and economic prosperity into the future.
Infrastructure during severe weather events has proven to be susceptible to damage and at times communities have experienced loss of power supply, the provision of a clean energy source which compliments the existing electricity network provides a secure supply of electricity to vulnerable communities in Tairawhiti.
Solar farms are resilient to climate effects as they are less susceptible to weather volatility and infrastructure can be designed to site conditions including natural hazards like flooding, ie height of panels, foundation design and incorporating flood mitigation measures such as bunds and or increasing ground levels.
Additionally, solar farms are not permanent and can be dismantled easily with very little impact on the land. So, at the end of its operational life a solar farm can either be repowered or the land can be returned to its current use.
For the above reasons, the project will provide for adaptation, resilience and recovery from natural hazards such as flooding.

Will the project address significant environmental issues?

Yes

Please explain your answer here:

Solar power generation does not produce greenhouse gas emissions like traditional fossil fuel-based power plants do. By using solar energy, we reduce the reliance on fossil fuels, which helps mitigate climate change.
Unlike fossil fuel combustion, solar power generation doesn't release harmful pollutants into the air or water, thereby reducing air and water pollution.
Solar energy is essentially inexhaustible and doesn't require the extraction of finite resources like coal, oil, or natural gas. This reduces the strain on ecosystems and landscapes from resource extraction activities.
While solar panels do require land for installation, they can often be integrated into existing farmland for instance which can still be utilised for stock grazing purposes reducing the need for additional land conversion, this ensures the productive capacity of land is maintained and often leads to identification of land which can be retired for protective purposes (wetland protection and riparian planting for instance) improving biodiversity.
Solar power can be generated locally, reducing the need for long-distance transportation of energy. This can lower associated environmental impacts, such as those from fuel consumption by transportation vehicles.
Solar power contributes to building resilience against the impacts of climate change by providing a decentralized and distributed energy source. This

means that even if certain regions are affected by extreme weather events, solar power generation can continue elsewhere, helping maintain energy availability and providing energy security to vulnerable communities such as Wairoa.
Economic Benefits: While not directly environmental, the widespread adoption of solar power can lead to economic benefits such as job creation, particularly in the renewable energy sector. This can help transition away from industries that have significant environmental impacts, like coal mining.
Overall, the adoption of solar power plays a crucial role in addressing environmental challenges by providing a clean, renewable, and sustainable source of energy.
Lastly, adverse effects associated with the project are able to be readily avoided, remedied or mitigated as is outlined in the effects assessment.

Is the project consistent with local or regional planning documents, including spatial strategies?

Yes

Please explain your answer here:

Tairawhiti Regional Policy Statement
The proposal involves the generation of electricity that will be fed into the local grid which is supported by the Built Environment, Energy, and Infrastructure chapter of the RPS.
The RPS recognises that nationally, the current pattern of energy use is unsustainable for economic and environmental reasons, there is a need to conserve finite fossil fuel energy resources and to make the transition to more sustainable sources of energy. (B3.1)
The RPS sets out a number of objectives and policies which recognise there is a responsibility by Council to promote energy efficiency and the use of renewable energy resources. (B3.2)
To achieve the efficient use of energy in a way that will help to ensure the continued availability of energy to meet the needs of the community, without compromising the sustainable management of natural and physical resources. (B3.2.1)
The Gisborne region, like other regions within New Zealand, is highly dependent on non-renewable fossil fuels for its energy needs. Fossil fuels (e.g. petroleum, gas, coal) are finite, expensive and there is a significant environmental cost associated with their use. In contrast, electricity usage in the region relies to a large extent on a renewable energy source; hydroelectric power. Solar, wind, biomass, crops and wood and hydro-electric power generation are the most promising sources of renewable energy for the future.(B3.3)
The objectives and policies also recognize that the progressive development and use of cost-effective and sustainable sources of renewable energy within the Gisborne region should be encouraged (by the Council) to support Government initiatives on renewable energy (and where it is shown that renewables projects are cost effective, technically viable and the effects of the development are acceptable. (B3.3.2)
Overall, the proposal is considered to be consistent with the objectives and policies of the RPS.

Tairawhiti Resource Management Plan
The Tairawhiti Resource Management Plan (TRMP) gives effect to the direction set by the RPS, including the identification of issues and associated objectives, policies and implementation methods.
Part C of the TRMP addresses Built Environment, Infrastructure and Energy which in relation to a Solar Farm development provides complimentary objectives for the provision of infrastructure which enables people and communities to provide for and enhance their environmental, social and economic wellbeing as well as for the provision of infrastructure which is designed, located, constructed, operated and maintained to ensure a safe and healthy environment, efficient use of energy resources.
Efficient and effective provision of network utility operations, including investment in that infrastructure, is not adversely affected by inappropriate land use, development and subdivision activities. (C1-C4 9.4.2.1)
Provide for the ongoing operation, maintenance, replacement and upgrading of network utilities and for the future development and operational requirements of new network utilities.
Recognise the benefits of efficient network utility infrastructure and, that in order to achieve sustainable management given the technical and physical constraints which may be experienced by network utility operations, including those associated with their scale, location, design and operation, a compromise of the natural and physical environment may occur.
To enable the development, maintenance and use of network utility infrastructure (including individually owned and operated systems) in a manner that avoids, as far as practicable, remedies or mitigates any adverse effects on the environment.
The proposal is considered to be consistent with the above objectives and policies as the provision of solar energy infrastructure in Tairāwhiti aims to enhance the environmental wellbeing of the community and to provide for a safe and healthy environment through the supply of renewable energy.
Additionally, the proposal provides for the development of network utility operations, recognises the benefits of efficient network utility infrastructure in order to achieve sustainable management, and enables the development of network utility infrastructure through the provision of a solar farm.
C6 Riparian Margins
Part C6 of the TRMP addresses Riparian Areas with the aim that develops maintain and enhance the vegetation, along the riparian management areas of the region's streams with encouragement given to indigenous planting. Thereby protecting stream bank erosion and enhancing indigenous biodiversity.
The Waipurupuru Stream is located to the south of the development site (also located along the northern boundary) the stream is void of any vegetative cover for the few species that live there (Inanga/Shortfin Eel). There may be opportunities to landscape some of the stream and boundaries of the site in discussion with the landowner and iwi to increase biodiversity in the area generally.
The establishment of indigenous vegetation along the riparian margins would protect the banks from erosion and flooding, and to enhance indigenous biodiversity. As such the proposal is considered to be consistent with relevant riparian policies of the TRMP.

C8 - Natural Hazards
Part C8 of the TRMP addresses Natural Hazards with the aim to mitigate risk to lives, property and infrastructure from those risks and does not worsen or accelerate the adverse effects of natural hazards upon the natural and physical environment.
The Project area is within an area liable to flooding. Detailed flood risk assessments are being undertaken to ensure the risk t infrastructure is mitigated during the design phase. Detailed natural hazard assessment is provided in the AEE section of this submission. The proposal will mitigate risk from flooding by ensuring that the solar PV arrays are driven in with piles and raised above ground level to an adequate height above flood level, velocity of flood water will also be taken into account together with geotechnical ground conditions to inform foundation design and piling depths thereby mitigating

the risk of damage to infrastructure from flooding.
Through detailed Flood Risk Assessment and design the development will ensure the risk of flooding is not accelerated and does not cause any diversion of overland flows of flood waters. As such, the proposal is considered consistent with natural hazard policies and objectives of the TRMP.
Section C5 addresses matters relating to Contaminated Land
Use and development or change of use and intensity of contaminated land could adversely affect human health by on site contamination or discharge of contaminates off the site. Contamination may adversely affect the biological and physical environment of the site of contamination. Subsequent discharge or movement of the contaminant off site may cause adverse environmental effects across a wider area. In some circumstances, the occurrence or extent of contamination, and the nature of the adverse effects of contamination may be uncertain.
In this instance a PSI has been undertaken which found that the majority of the site has been utilised as pasture and for horticultural purposes, the site is considered to be a HAIL due to the horticultural uses undertaken there. However exposure to users from contaminants of concern during operational phase is considered to be highly unlikely on the basis that the site will be limited to intermittent maintenance of solar panels and office/control room use. These exposures are expected to be short in duration and considered highly unlikely to harm human health.
There is a potential exposure pathway to construction workers during the construction phase of the development. Soil samples have not been taken from the site to determine soil contamination levels however, exposure will be minimal and short in duration while foundation piles are being driven into the ground. It is anticipated that soil disturbance will meet the Permitted Activity thresholds of the NES-CS for land disturbance. A site management plan will be prepared detailing controls to minimise exposure to coworkers should contaminants in soil be present. If any of the permitted activity thresholds are exceeded, the application will seek to undertake a more detailed site investigation (DSI).
As such, the proposal is considered consistent with the contaminated Land policies and objectives of the TRMP.
Overall, the proposal is considered to be consistent with the objectives and policies of the Tairawhiti Resource Management Plan.

Tairawhiti 20-50 Spatial Plan

The Tairawhiti Spatial Plan outlines the desires of Tairawhiti to address an array of challenges and opportunities for the future. The plan is focused on a shared responsibility for delivery of those outcomes with an emphasis on the four Wellbeing's being Social, Environmental, Cultural and Economic Wellbeing. Environmental and Economic Welllbeing's are listed as follows:
We maintain the health of our soils, air, fresh water and coastal environments. Our region's biodiversity is restored and protected. We improve land uses to ensure they are environmentally sustainable.
Our communities are financially secure and contribute to a growing regional economy. Infrastructure is provided to enable businesses to establish, thrive and create new employment opportunities. Our rural townships benefit directly from ongoing economic investment.

Outcome 2 – Resilient Communities
We have increased the resilience of our infrastructure, economy and our communities. We act now and plan for future generations. We have taken the community with us on the journey to resilience and engaged in community-led adaptation planning. We have futureproofed our way of life.
We can limit the effects of climate change by moving toward a zero emissions economy and fast-tracking climate change mitigation actions so Tairāwhiti is carbon neutral before the national 2050 target.
The changing climate could provide opportunities that we can use to our advantage.
Increase our energy resilience through cogeneration, waste to energy and small scale renewable energy generation schemes.
The relevant aspirations of Outcome 2 are:
• We are a carbon neutral region.
• We are leaders in renewable energy and technology.
• We use a risk based approach to manage natural hazards and climate change adaptation.
• We have a network of natural defences that provide protection against natural hazards and climate change.
• Infrastructure and other significant resources vulnerable to natural hazards and climate change have been moved, protected or there is a plan for the future.
• Everyone has access to affordable and safe essential services (water, wastewater, energy)

Outcome 5 – We take sustainability seriously
We recognise the threat of climate change and are responding to this challenge by changing the way we live and do business. Our region will realise the benefits to society from creating clean energy, lowering carbon emissions, and reducing our ecological footprint. We use green infrastructure to deliver greater resilience, long-term cost savings and quality environmental outcomes.
Adopt sustainable land use practices that contribute to ecological diversity, healthy waterways and marine environments, and the health and well-being of local communities.
Support the uptake of solar and other sustainable energy solutions for our homes and businesses
The relevant aspirations of Outcome 5 are:
• Land uses across the region are optimised to suit their physical and cultural setting, and have adapted to changing climate patterns

• We incorporate energy efficiency practices into all of our buildings and technology.

Overall it is considered that this proposal helps to achieve the outcome 2 - resilient communities and outcome 5 – Sustainability set out in the Spatial Plan 20-50

Anything else?

Please write your answer here:

NA

Does the project includes an activity which would make it ineligible?

No

If yes, please explain:

NA

Section 8: Climate change and natural hazards

Will the project be affected by climate change and natural hazards?

Yes

If yes, please explain:

Effects from Natural Hazards
A desk top Flood Risk Assessment has been undertaken with a more detailed flood study to follow. The assessment deemed the site as having a moderate to high risk of flood hazard given proximity to the Uawa River immediately to the east and the Waipurupuru Stream which is located along the southern extent of the site and another branch of the same stream located along the northern boundary. The site has historically been affected by flooding from the Uawa River and was inundated during Cyclone Gabrielle. The site is mapped as being located within an area liable to flooding on Gisborne District Council's Tairawhiti Mapping System.

A detailed flood risk assessment is recommended so that flood depths, extents and velocities for a range of design rainfall events for the site can be modelled to inform detailed design stage. The key risks a detailed flood study will provide are the extent to which inundation from flood waters might affects critical infrastructure, velocity of flood water potentially damaging assets and changes to the flood plain storage and overland flow paths due to earthworks and site re-development. Additionally the risk to the site from debris flow will also be assessed.

The proposal aims to mitigate the effects of flooding in an area liable to flooding by ensuring development works including the location of buildings and structures together with any ground preparation works which might include earthworks will not accelerate or worsen the effects of flooding and by ensuring solar arrays are suitably raised above ground level.

Detailed Flood Risk assessment including debris flow mapping will ascertain what protection measures maybe required within the development to protect against the effects of flood waters but will also need to consider how these measures can be implemented so as not to affect surrounding properties by exacerbating the effects of flooding.

A geotechnical investigation will be undertaken to inform foundation design across the development. The geotechnical investigation will assess ground conditions including identification of any uncontrolled fill that might be present, groundwater levels and liquefaction risk to determine pile depth to achieve embedment. The assessment will ensure the development is designed in a manner that avoids any significant risk from instability.

Mitigation measures through design and conditions of consent can be implemented to ensure the effects of natural hazards are managed to an acceptable level.

Section 9: Track record

Please add a summary of all compliance and/or enforcement actions taken against the applicant by any entity with enforcement powers under the Acts referred to in the Bill, and the outcome of those actions.

Please write your answer here:

Waihi Hydro Electric Power Scheme

An abatement notice was issued by Hawke's Bay Regional Council on 24 December 2015 and reissued on 6 January 2016, requiring Eastland Generation to close the sluice gates at the dam to prevent the discharge of silt into the Waiau River. The discharge began after a sluice gate was damaged in a storm in September 2015, with damage to the gate preventing it from being fully closed. Repair of the sluice gate was complicated by the somewhat unusual design of the dam, with the sluice gates located at the bottom of the dam face, meaning the gates are entirely underwater and complicating inspection and repair processes. Repair works were also delayed following issue of the abatement notices until an engineers' report could be provided and resource consents for the repair work obtained. Repairs were completed in March 2016 allowing closure of the sluice gates. This stopped sediment discharges down the river and enabled power generation to recommence.

In May 2016 HBRC laid charges against Eastland Group and contractors involved in repair of the sluice gates in relation to the works carried out on the Waihi Dam and the subsequent discharge of silt into the Waihi and Waiau Rivers. HBRC and Eastland Group subsequently agreed to resolve the prosecution without a conviction being entered in light of the understanding HBRC subsequently obtained of the events, in recognition of the commitments made by Eastland Group to come to a settlement and that pursuing a court case would have no direct benefit to the Wairoa community. No further action has been taken since that time.

Te Ahi O Maui Geothermal Power Station

An abatement notice was issued by Bay of Plenty Regional Council on 4 March 2019 in relation to alleged breaches of Eastland's resource consent 67340 for the take and discharge of geothermal fluid from the Kawerau Geothermal Reservoir. The abatement notice relates to exceeding the daily allowable limit of geothermal fluid on some occasions during the start-up and commissioning of the Applicants Te Ahi O Maui Geothermal Power Station. The Applicant worked with the BOPRC to determine the cause of the exceedances (incorrectly calibrated equipment and calculations in software) and resolve them to ensure that there would be no reoccurrence. No further action has been taken by the BOPRC since that time.

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Declaration

Do you acknowledge your submission will be published on environment.govt.nz if required

Yes

By typing your name in the field below you are electronically signing this application form and certifying the information given in this application is true and correct.

Please write your name here:
Ben Gibson

Important notes